HANDBOUND
AT THE
UNIVERSITY OF
TORONTO PRESS

THE MEDICAL RECORD.

A Weekly Journal of Medicine and Surgery.

EDITED BY

GEORGE F. SHRADY, A.M., M.D.,

SURGEON TO THE PRESBYTERIAN AND ST. FRANCIS HOSPITALS, NEW YORK, AND CONSULTING SURGEON TO THE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK.

Volume 21.

JANUARY 7, 1882—JUNE 24, 1882.

113.106
6872H

NEW YORK:
WILLIAM WOOD & COMPANY.
1882.

TROW'S
PRINTING AND BOOKBINDING COMPANY,
201–213 *East 12th St.*,
NEW YORK.

LIST OF CONTRIBUTORS TO VOL. XXI.

Abbe, Dr. Robert, New York.
Agnew, Dr. C. R., New York.
Allen, Dr. Almon S., Brooklyn, N. Y.
Atkins, Dr. Francis H., Fort Stanton, New Mexico.

Ballery, Dr. G. H., Paterson, N. J.
Barrows, Dr. Chas. C., Willet's Point, N. Y. H.
Baruch, Dr. S., New York.
Beard, Dr. George M., New York.
Bennet, Dr. J. Henry, Mentone, France.
Beyer, Dr. H. G., U. S. Navy.
Bigelow, Dr. Horatio R., Washington, D. C.
Block, Dr. J., Kansas City, Mo.
Bodenhamer, Dr. William, New York.
Bosworth. Dr. F. H., New York.
Bradley, Dr. Wm. L., New Haven, Conn.
Bradner, Dr. W. B., Warwick, N. Y.
Brewer, Dr. E. P., Norwich, Conn.
Brewer, Dr. George E., Buffalo, N. Y.
Brown, Dr. N. F., Detroit, Mich.
Browne, J. Crichton, London, Eng.
Burke, Dr. Martin, New York.
Burr, Dr. Geo., Binghamton, N. Y.
Burrall, Dr. F. A., New York.

Carpenter, Dr. W. M., New York.
Carroll, Dr. A. L., New Brighton, N. Y.
Castle, Dr. F. A., New York.
Chase, Dr. Meigs, Oneonta, N. Y.
Cheesman, Dr. W. S., Auburn, N. Y.
Comings, Dr. A. F., Parsons, Kan.
Corning, Dr. J. Leonard, New York.
Corrigan, Dr. J. F., South Orange, N. J.
Crothers, Dr. T. D., Hartford, Conn.
Cutter, Dr. Ephraim. New York.
Cutter, Dr. Geo. R., New York.

Dalton, Dr. John C., New York.
Dana, Dr. Chas. L., New York.
Dawson, Dr. W. W., Cincinnati, O.

Ely, Dr. Edward T., New York.

Felton, Dr. Lucius E., Potsdam, N. Y.
Flynn, Dr. J. W., New York.
Fox, Dr. Geo. Henry, New York.
French, Dr. J. M., Simsbury, Conn.
Fuller, Dr. Robert M., New York.

Garrigues. Dr. Henry J., New York.
Geddings, Dr. W. H., Aiken, S. C.
Gibney, Dr. V. P., New York.
Graham, Dr. A. C., Dallas, Texas.
Grainger, Dr. W. H., Boston, Mass.
Gray, Dr. Landon Carter, Brooklyn, N. Y.
Green, Traill———
Gregg, Dr. Rollin R., Buffalo, N. Y.
Gunn, Dr. J. H., Calera, Ala.

Halderman, Dr. Davis, Columbus, O.
Hall, Dr. A. L., Fairhaven, N. Y.
Hamilton, Dr. Allan McL., New York.
Harrison, Dr. J. M., Minneapolis, Minn.
Hart, Dr. Charles A., Plainfield, N. J.
Harvey, Dr. P. F., Fort Snelling, Minn.
Hinsdale, Dr. Guy, Philadelphia, Pa.
Houston, Dr. Thomas F., Clarkesville, Ga.
Hunt, Dr. S. H., Long Branch, N. J.

Jackson, Dr. Geo. T., New York.
Jarvis, Dr. Wm. C., New York.
Jervis, Dr. D. H., Lone Pine, Pa.
Jones, C. Handfield, F.R.S., London, Eng.
Jones, Dr. Nelson E., Circleville, O.
Jones, Dr. Talbot, St. Paul, Minn.
Judkins, Dr. Wm., Cincinnati, O.

Kales, Dr. J. W., Union Springs, N. Y.
Kane, Dr. H. H., Fort Washington, N. Y.
Knapp, Dr. Herman, New York.

LaRoe, Dr. James G., Greenpoint, L. I., N. Y.
Lewis, Dr. Daniel, New York.

Maclean, Dr. Donald, Ann Arbor, Mich.
Markoe, Dr. Thomas M., New York.
Martin, Dr. H. A., Boston, Mass.
McClellan, Dr. George, Philadelphia, Pa.
Mendelson, Dr. Walter, Leipzig, Germany.
Milne, Dr. T. Clarke, Massilon, O.
Milton, Dr. M., Bradford, Pa.
Morgan, Dr. Wilbur P., Baltimore, Md.

Newton, Dr. R. C., U. S. Army, Fort Stanton, N. M.

Otis, Dr. F. N., New York.

Pallen, Dr. Montrose A., New York.
Peck, Dr. Edward S., New York.
Peters, Dr. George A., New York.
Peters, Dr. John C., New York.
Pilcher, Dr. Lewis S., Brooklyn, N. Y.
Pitkin, Dr. Leonard F., Newark, N. J.
Polk, Dr. Wm. M., New York.
Pomeroy, Dr. Oren D., New York.
Post, Dr. A. C., New York.
Post, Dr. Geo. E., Beirût, Syria.
Putzel, Dr. L., New York.

Rafter, Dr. J. A., Whiting, Kansas.
Rankin, Dr. Francis H., Newport, R. I.
Raymond, Dr. H. J., U. S. A., Alcatras Island, Cal.
Read, Dr. H. H., Halifax, N. S.
Ripley, Dr. John H., New York.
Roberts, Dr. M. Josiah, New York.
Rockwell, Dr. A. D., New York.
Roosa, Dr. D. B. St. John, New York.
Root, Dr. P. S., Monroe, Mich.

Sands, Dr. H. B., New York.
Satterthwaite, Dr. T. E., New York.
Schultze, Dr. R. C., New York.
Searcy, Dr. J. T., Tuscaloosa, Ala.
Sexton, Dr. Samuel, New York.
Shaffer, Dr. Newton M., New York.
Shrady, Dr. Geo. F., New York.
Simmons, Dr. Duane B., Yokohama, Japan.
Speer, Dr. A. T., Newark, O.
Spitzka, Dr. E. C., New York.
Starr, Dr. M. Allen, New York.
Sternberg, Dr. Geo. M., Surgeon, U.S.A.
Stickler, Dr. J. W., Orange, N. J.
Stillman, Dr. Chas. F., New York.

Tait, Lawson, F.R.C.S., Birmingham, Eng.
Taylor, Dr. J. B., New York.
Thomson, Dr. Jos. C., Canton, China.
Tyndale, Dr. J. Hilgard, New York.

Valentine, Dr. Ferdinand C., New York.
Vance, Dr. Ap Morgan, Louisville, Ky.

Wendt, Dr. E. C., New York.
Whittaker, Dr. James T., Cincinnati, O.
Williams, Dr. Cornelius, New York.
Wood, Dr. Halsey L., Michigan.
Woodside, Dr. John S., Flatbush, L. I., N. Y.
Wyeth, Dr. John A., New York.

Institutions and Societies from which Reports have been received.

American Medical Association.
Bellevue Hospital.
Cincinnati Academy of Medicine.
Cincinnati Medical Society.
Connecticut Medical Society.
Cook County Hospital, Chicago, Ill.
German Congress for Internal Medicine.
Hospital of the University of Pennsylvania.
Manhattan Eye and Ear Hospital.
Materia Medica Society. (New York.)
Medical and Chirurgical Faculty of the State of Maryland.
Medical Society of the County of New York.
Medical Society of the State of New Jersey.
Medical Society of the State of New York.
Medical Society of the State of Pennsylvania.
New York Academy of Medicine.
New York Pathological Society.
New York Society of German Physicians.
New York Surgical Society.
Practitioners' Society of New York.
Queen Charlotte's Lying-in Hospital, London, Eng.
St. Francis' Hospital, New York.

THE MEDICAL RECORD.

VOL. XXI. JANUARY 7, 1882. No. 1.

Original Communications.

A PLEA FOR IMPROVED VACCINATION.

BY S. BARUCH, M.D.,

HONORARY MEMBER AND EX-PRESIDENT SOUTH CAROLINA MEDICAL ASSOCIATION; SURGEON TO THE EYE, EAR AND THROAT DEPARTMENT, N. E. DISPENSARY, NEW YORK.

A RECENT editorial in this journal presents a succinct view of the merits of vaccination, and answers some of the arguments of the anti-vaccinationists with the irrefragable "logic of facts." The writer says: "It is becoming somewhat tiresome to have to reiterate the truths of vaccination, and it will sometimes occur to us that the best way after all would be to leave the question alone and let the people find out the facts themselves. But both humanity and a pride in our profession forbid that anti-vaccination arguments should go unanswered, when popular ignorance is plainly being imposed upon by them."

It is gratifying to note that an influential journal calls attention to the importance of heeding the influence of these people upon the public, who are so readily entrapped by pseudophilanthropists of all stripes. The busy practitioner is too prone to believe that he has done his whole duty when he has obtained pure (?) bovine virus and inserted it into the arms of all the babies in his clientele. He regards with contempt the anti-vaccination agitation, characterizing it as the offspring of ignorance and fanaticism, and refrains from studying their arguments and statistics because he is satisfied that the experience of the profession sustains him in continuing the much-abused practice. In the course of a thorough study of the subject of vaccination, undertaken while Chairman of the State Board of Health of South Carolina, I had occasion to canvass the arguments of the anti-vaccinationists, and I confess that some of their claims are not without substantial basis. It can, for example, not be denied that a very large proportion of admissions—a large majority in some small-pox hospitals—are cases bearing vaccine-marks upon their arms, and that many of these cases succumb to the disease. Like all extremists, the anti-vaccination people claim to receive from such statistics confirmation of their assertion that Jenner's grand discovery has proved unavailing. But they ignore the fact that Jenner claimed only the same immunity for the vaccinated which was possessed by those who had passed through small-pox. There is, however, much food for reflection in statistical tables. My recent investigation of this subject demonstrated clearly to my mind not only the protective influence of vaccination against small-pox invasions, but also its ameliorating effect upon the type of the disease when contracted, and the diminution of the mortality thus wrought by it. No fair-minded person could deny the latter especially. But I was also surprised to discover *unsought* evidence upon another point. A critical examination of all the records of small-pox from 1818 to 1880 brought out the fact that, in the epidemics (of which we have reliable data) from 1818 to 1870, the *average mortality among vaccinated patients was* 4.32 *per cent.*, while in the more recent epidemics, from 1870 to 1880, the *average mortality among vaccinated patients was* 12.52 *per cent.* The Prussian and English records, although not offering so great a difference, will serve to illustrate this point. From 1848 to 1859 there were reported in Prussia 46,898 cases of small-pox, among which there was a mortality of 6 per cent. among the vaccinated. But in the records from 1871 to 1872, of the Berlin small-pox hospitals, I find an average mortality of 14.55 per cent. among the vaccinated. Again, the London small-pox hospitals report, from 1836 to 1856, 9,000 cases, among which there was 5 per cent. mortality among the vaccinated, while, from 1871 to 1878, they report 9,158 cases with a mortality of 10.93 per cent. among the vaccinated. What is the cause of this increased mortality among the vaccinated during the past decade? To the unbiassed student of the history of the recorded epidemics one pre-eminent cause must present itself, viz., *the neglect of Jenner's teachings.*

During Jenner's active work, and in the years immediately succeeding, the "golden rules" of the illustrious discoverer were scrupulously followed. His influence swayed the medical mind long after his labors were brought to a close. Filled with the recollection of the dread scourge from which he was liberating the world, medical men regarded his every rule as imperative. Arm-to-arm vaccination, with lymph carefully chosen from eighth-day pustules, was the rule, and, without questioning its infallibility, it was obeyed. As the terrific nightmare, which had brooded over the profession until Jenner dispelled it and infused hope in its stead, faded from their recollection, and when the enemy seemed bereft of his power, their vigilance relaxed.

Modifications were introduced, various methods of obtaining, preserving, and propagating lymph were adopted; mothers and nurses regarded themselves competent to perform this operation seemingly so trifling. It was not long ere the consequences of neglect and indifference made themselves felt. Holding the view that the inadequacy of vaccination in recent years is the cause of the imperfect protection afforded, I will enforce it by reference to several recent reports of committees.

In 1860 to 1864, Drs. Stevens, Buchanan, and Sanderson reported to the British Government ("Reynolds' System of Medicine," vol. i., 171, Seaton), that an examination of half a million vaccinated children revealed the startling fact that not more than one child in eight was found to be so vaccinated as to have the highest degree of protection that vaccination is capable of affording; not one in three could, on the most indulgent estimate, be considered well protected. On page 151, Dr. Marson says: "Cases of small-pox have kept gradually increasing in numbers until they now amount to four-fifths (!) of the admissions into small-pox hospitals." On page 152, Dr. Marson also demonstrates that, out of 544 cases having four or more vaccine-marks, only one-half of one per cent. died of small-pox, and that the mortality increased in an inverse ratio to the number and quality of the scars.

In the "Report of the British Army Medical De-

partment for 1877" (p. 229), Surgeon-Major Archer, who took great pains to investigate and note the marks of all recruits examined by him, proves that "*a large proportion of adults of the present generation are imperfectly vaccinated. Forty per cent. of the young recruits were insufficiently protected.* He also shows that the liability to small-pox bears a distinct relation to the *quality* of the vaccination.

The same result has been shown by the "Report of the Hampstead and Homerton Small-Pox Hospital." Dr. Bridges, in his report to the Local Government Board, divides the cases registered into four classes.

Hampstead Hospital, from 1876 *to* 1878.

Class I.—Patients bearing marks of good vaccination. The death-rate was 57 per 1,000; ranging, however, from 31 per 1,000 in patients with four marks or more, to 95 per 1,000 in patients with one mark or more.

Class II.—Patients bearing marks of indifferent quality. The death-rate in this class was 113 per 1,000; ranging from 58 per 1,000 in patients with four or more such marks, to 143 per 1,000 in patients with one or more such marks.

Class III.—Patients stated to have been vaccinated, but showing no evidence. The death-rate was 320 per 1,000.

Class IV.—Unvaccinated patients. Death-rate 468 per 1,000.

Homerton Hospital, from 1871 *to* 1878, *same classification.*

Class I. showed a death-rate of 33 per 1,000; ranging from 15 per 1,000 in patients with four good marks, to 39 per 1,000 with one mark.

Class II. showed a death-rate of 111 per 1,000; ranging from 55 per 1,000 to patients with four marks, to 158 per 1,000 in those with one mark.

Class III. gave a death-rate of 272 per 1,000.

Class IV. gave a death-rate of 452 per 1,000.

Here we have carefully collated data, which prove conclusively that the *influence of vaccination upon the mortality of, and pari passu upon the liability to small-pox, is in an unmistakably direct ratio to the quality of the vaccination*, diminishing with the imperfect and increasing with the perfect manner in which this operation has been done.

It behooves every physician to ask himself what share he bears in the perpetuation of the imperfect vaccination which has evidently been practised during the past twenty or thirty years. How many medical men do now devote the time and attention necessary to the selection of the lymph, the examination of the vaccinee, the proper inoculation of the lymph, the inquiry regarding the result, and the revaccination of imperfectly matured cases and cases whose protection is rendered doubtful by complicating inflammatory conditions?

I do not know a single physician who is a *true disciple of Jenner* in this respect, or who carefully follows Marson's and Seaton's directions, so ably and earnestly inculcated in their works on this subject. Glaring deviations from health in the infant are not overlooked, but there are some obscure ailments which should be inquired after. So trifling a trouble, for instance, as intertrigo, is regarded by Seaton as a bar to vaccination (unless in the presence of small-pox exposure). Many infants presenting a robust appearance are affected by this ailment in the lower part of the body, where it is hidden from the eye of the physician. To the careful physician's inquiry regarding the health of the babe, the mother points with pride to its well-developed limbs and rounded outlines, deeming the intertrigo a matter of no consequence—a trouble which is "natural to fat babies." I do not propose to enter into this subject as fully as its importance demands, because the literature of vaccination abounds with precise, minute, and reliable data. Regarding the selection of lymph, sufficient care is not exercised. Scabs are frequently used. These not rarely contain pus or blood, or are obtained from inflamed surfaces, all of which not only offer serious impediments to successful vaccination, but may also, as is well known, excite constitutional or local disturbance of grave character. In these days of mercenary traffic in all things, human life is but too often regarded as naught when placed in the scale against profit. The tottering tenements, the rotten ships, the rusty boilers and frail bridges which have sent their victims into eternity, bear witness to this fact. Is it not possible—yes, probable—that this mercenary spirit has touched the dealers in "vaccine virus" and rendered them careless regarding the maintenance of its purity and efficiency? When we remember the extreme care necessary for the preservation of the human and the cultivation of the animal "virus," the skill and familiarity with the entire subject demanded of those who are engaged in this work, we cannot be too careful with reference to the source of our supply. In this matter we are at the mercy of the dealers, among whom there are doubtless many who realize its importance, and who are scrupulously honest in the recommendation of their wares; and yet I have observed that, out of thirty-five vaccinations made by myself last winter, with bovine "virus" purchased from one of the most reliable drug-houses in this city, I had no less than ten "irregular" vesicles, which took on an inflammatory action, resulting in fibrinous deposits and extensive erysipeloid blush over arm and shoulder. I have a vivid recollection of two babes whose arms and shoulders were enormously swollen, brawny, tense, and in one of whom constitutional disturbance was alarming. These children, who had been in perfect health up to the time of vaccination, were vaccinated by experienced and justly distinguished physicians, who would neglect no precaution with reference to the purity of the "virus" or its careful insertion. In the majority of cases referred to there was no other cause to which the systemic and local disturbances could be charged but some defect in the "virus." All physicians will readily recall similar instances in their own experience. According to Seaton, "*a vaccination presenting any deviation from the perfect character of the vesicle and the regular development of the areola is not to be relied on as protective against small-pox.*" "A spoiled and broken appearance of the vesicle, which is frequently on the eighth day ascribed to rubbing or mechanical irritation, is often really an irregularity arising from one or other of these causes (either the use of lymph not well chosen, or to something amiss in the state of the child vaccinated)." How many of our vaccinations approach in their results the standard of this authority? And yet, his large experience, sustained by others of equal eminence, induces him to lay down the above "one important, practical fact." How many physicians resort to revaccination in cases of inflamed or otherwise irregular vesicles? I know not one who would have the hardihood to propose revaccination to the mother of a child which has recently passed through illness of three or four weeks, produced by vaccination of

"pure (?) virus." The mother having a fear of the repetition of sleepless nights and anxious days with her fretting babe before her, will almost surely decline. I have heard mothers say they would risk a liability to small-pox rather than expose their children to a repetition of the ordeal.

With regard to the method of operating, I need not dwell upon the well-known fact that mothers and nurses often take upon themselves this work, deeming it only necessary to scratch the surface and apply the "virus," and regarding the efficiency of the procedure in exact proportions to the amount of irritation and the size of the vesicle they have produced. Nor are physicians as careful with this seemingly trifling procedure as its real importance demands. We are too prone to lose sight of the *fact* that the imperfect execution of this operation may at some future time result in loss of life and destruction of happiness, which the imperfect performance of any one of the capital operations could not approach in direness. Jenner, Seaton, and others devote page upon page to the description of this seemingly slight operation, to pointing out the causes of failure and modes of avoiding the latter. And yet how many students are taught these invaluable lessons? Marson says with much feeling: "Great care is given to teaching and learning the capital operations, as they are called, which not one practitioner in twenty through the whole country ever performs; no care, or next to none, to teaching and learning the other (vaccination), which nearly all, when in practice, will have to perform frequently. As medical and surgical practitioners, our object should be to save all the lives we can by our art, no matter by what means; and if a little operation—little, apparently, in practice, but very important in its results—well performed can save many lives, as most certainly it can, and prevent much suffering and sorrow, it should surely always be done with the greatest care and in the best known way. The success of all operations depends on nice care and management. Operations for hernia and for stone, for instance, if roughly, carelessly, and badly done, end badly; so it is with vaccination; and, so far as the public are concerned, it is quite as objectionable to them, no doubt, to die of small-pox, because they have been carelessly and badly vaccinated, as it would be to them to die of hernia or stone, because the operations for these complaints respectively had been badly performed. In the latter case the day of retribution would come immediately; in the former, unfortunately for its correction, it is delayed perhaps for twenty years or more; otherwise it would soon be set right."

I have quoted somewhat at length from this excellent writer, because his life has been spent in the effort to counteract the evils of bad vaccination. It would appear from the writings of Seaton that the degeneration which has been attributed to the "virus," on account of its long descent through the human body, is really a myth, and that this charge of degeneration belongs more justly to the technique of vaccination.

Marson and Seaton affirm that they have found virus of undoubted Jennerian descent, successful in the production of true Jennerian vesicles after transmission through a period of fifty years. I do not propose to enter the lists against the advocates of bovine virus. Far be it from me, for this substitute for the humanized lymph is extremely useful for preservation and transportation, and affords good protection when genuine and carefully guarded and inoculated. But I do hold that the good old Jennerian plan of arm-to-arm vaccination should be resorted to whenever practicable. That it is often practicable to the painstaking physician no one will doubt.

The remedies for the existing imperfect protection against small-pox would, in my judgment, be found:

First.—In renewed attention to the selection of proper eighth-day lymph, more careful cultivation of bovine "virus," greater care in both cases to scrutinizing and tracing it to a pure source. Each supply should be tested on one healthy vaccinee before it is extensively inoculated. Especially is this precaution needed in the use of bovine "virus," which not rarely produces local irritation, whose effect is pernicious upon the protective influence afforded by it.

Second.—Too much attention cannot be given to the methods of vaccination now in vogue—the technique of this simple procedure. Those who are not familiar with the writings upon this subject by Marson and Seaton, would do well to study their valuable suggestions and elaborate directions, especially with reference to the watchfulness necessary when the vesicle is maturing or matured. The care precision, and attentive regard for minutiæ which the men of Jenner's day and the time immediately succeeding bestowed upon this seemingly trivial work, may be profitably emulated by the present generation of medical men, if they would protect their fellow-men against the terrible scourge which now and then invades our cities and populous country districts.

Third.—A more thorough instruction of medical students in the details of obtaining supplies of vaccine material, in the methods of its propagation, in the technique of vaccination, in the diagnosis of the true from the spurious vaccine vesicle, is imperatively demanded. The medical student cannot be too deeply impressed with the idea that this operation, slight as it may seem, will confer greater benefits to the people under his care than all the skill he may acquire in surgery. The admirable instructions on vaccination, written by Mr. Simon, for guidance of "vaccinators under contract," by order of the Privy Council, July 29, 1871, are a model upon which teachers may successfully construct their lectures on this subject. No medical student should be allowed to graduate who does not exhibit a full appreciation of the importance of vaccination and a thorough knowledge of all its details.

Fourth.—I would suggest the inauguration of a new specialty. The "vaccinator" would in our large cities (which are the habitat of most specialists) prove far more useful to the public than many of the specialists who now minister to its numerous "special ills." A vast deal of good would be accomplished by men who, like Marson and Seaton, have studied the subject of vaccination in all its details, and who would relieve the general practitioner of all care in this important matter. A large number of educated physicians may devote themselves to this branch of study and practice with credit and profit to themselves and to the profession. As it now stands, the general practitioner obtains but little thanks, frequently not even compensation (for it seems to be by many regarded as a *complement* to the labor case), for this work. The opprobrium, on the contrary, resulting from the insufficient protection due to various causes over which the busy doctor has but little control, is unstinting. The greatest bene-

fit, however, would accrue from this departure. Just as in other departments vast results have been achieved by special study, so will in time be accumulated large stores of statistical information and practical improvements in the methods of cultivating the vaccine-lymph and transmitting the vaccine disease in its purity and genuine type. Let it be borne in mind that the grand aim of medicine, the "stamping out" of small-pox, has thus far not been reached. On the contrary, we are confronted daily by failures, and taunted by the frequent recurrence of small-pox epidemics. This failure of vaccination to accomplish its alleged mission is converting a credulous public to the doctrines of the anti-vaccinationists, and thus adding fuel to the disease. I have attempted to demonstrate the cause of failure and to point out the remedy. The immeasurable importance of this subject demands earnest and immediate action on the part of the medical profession.

144 West Forty-third Street, New York.]

REPORT OF CASES OF PHTHISIS

Treated During 1880-1881.

By W. H. GEDDINGS, M.D.,

Aiken, S. C.

(Continued from The Medical Record, November 15, 1879, October 30 and November 6, 1880.)

Of the cases described in my report for 1878–79, and 1879–80, a few returned to Aiken, and thus afforded me the opportunity of presenting the continuation of their case histories.

Case IV.—Succumbed to his disease after having passed seven seasons at Aiken with more or less improvement.

Case V.—The improvement noted in this case has continued, but, being of a rather nervous temperament, could not be induced to submit to an examination. He has now enjoyed good health since May, 1879.

Case VI.—This patient returned to Aiken, but did not consult me. She presents the appearance of a girl in perfect health, and her mother reports that she is doing well.

Case XV.—Continues to enjoy perfect health.

Case XVII.—November 15th, pulse 92, temperature 99.4. Cough slight, with a small amount of expectoration. There is still diminished resonance over the upper portion of the left chest, extending from clavicle to third rib. Respiration somewhat feeble, with an occasional squeak, the result of an acute bronchial catarrh contracted during the journey South. Posteriorly, there is dulness over suprascapular region, the respiration being roughened, with prolonged expirium.

May 4th.—Has passed the winter without any relapse. Her color is fresh and ruddy; her flesh is firm, and her weight 130½ pounds, which is more than she ever weighed in perfect health. The only reminder of her former disease is an occasional hack. The old area of dulness over the left apex is still present, but the more recent one to the outer side of the heart has entirely disappeared. No change in the condition of the lung posteriorly. This patient has purchased a residence at Aiken, and intends making it her future home.

Case XXIII.—Wintered in Aiken, but did so well that he did not require the advice of a physician. He looked quite robust, and appeared to be in perfect health.

Case XXIX.—Went to Colorado, expecting to establish himself in business there; but, finding that the climate disagreed with him, returned to Aiken, where he passed the winter.

April 28th.—Pulse, 88; temperature, 98°; weight, 134½. Has had no relapse, goes about without regard to weather, and has the appearance of a perfectly healthy man. On the right side there is still dulness over the upper third of the scapula and over the corresponding interscapular space. Respiration somewhat jerking, but in other respects normal.

Case XLI.—Passed the summer in West Virginia, where she was exposed to intense heat, combined with a high degree of relative humidity, which caused her to lose much of what she had gained at Aiken. On her arrival (November 19th) she was pale, thin, and decidedly cachectic in appearance. Pulse, 102; temperature ranging from 99° in the morning to 101° in the evening. Over the upper portion of the right lung there is diminished resonance in front, with dulness behind over the upper two-thirds of the scapula. Respiration bronchial, with prolonged expirium.

May 13th.—Patient had a slight hemorrhage in February, and in April an attack of diarrhœa. In every other respect she has done well and is much improved. Pulse, 96; temperature ranges from 98.50° to 99.2°. Cough is slight, and the expectoration does not exceed one ounce in twenty-four hours. Over the right front there is dulness above and under the clavicle, with harsh respiration, but without râles. Behind there is diminished resonance half down the scapula, with feeble respiration.

Result.—It will be observed that this patient regained much of what she had lost during the summer, increasing in weight and improving in strength, together with diminution in the extent of the disease.

Case XLIII.—This patient, in whom the disease has remained quiescent for years, had some little twinging of sputa in February, but remains quite well and pursues her accustomed avocations.

Case XLIV.—Passed the winter in Aiken, but did not report until January 7th. His temperature was normal, and his weight had increased to 135 pounds, a gain of 9 pounds. His face had the ruddy hue of health, and, with the exception of a limited area of dulness, there were no evidences of disease. In a letter from him, dated October 23, 1881, he states that during the last three months he has filled the arduous duties of cashier in a large mercantile establishment in Massachusetts, without losing a single day through sickness. He still remains free from cough. This patient was sent to Aiken as a *dernier ressort*, his physician stating that he might possibly improve, but intimating that his case was a desperate one.

Case XLVII.—Returned to Aiken, but failed to present himself for examination. His appearance was that of a well man, and his physician informs me that, with the exception of one hemorrhage, he has had no trouble since his departure from Aiken the previous spring.

Case LI.—Passed the summer at Bethlehem, N. H., where he remained quite well, and returned to Aiken in November. His color was good, his pulse and temperature normal, and his weight 142 pounds. Cough very slight, with a trifling amount of expectoration in the early morning. Physical examination revealed no symptoms of disease other than a limited amount of dulness over the right supraclavicular region.

May 1st.—Has gone through the winter without

any relapse. He sometimes has an occasional hack in the morning, but there are no evidences of disease other than diminished resonance over the outer half of the supraclavicular space. Has not been confined a single day to his room during the whole winter.

Case LIX.—Encouraged by her improvement at Aiken, this patient concluded to remove to Santa Fé, N. M., where she had relatives. Not liking the social aspects of that place, she went to Colorado Springs; but while there a valvular affection of the heart, of which symptoms had been observed at Aiken, became so aggravated by the altitude as to necessitate her return to her home in Washington.

January 14th.—Looks strong and healthy, but is harassed with almost incessant cough, the result of laryngeal catarrh, the vocal cords and surrounding parts being much congested. Pulse, 92; temperature, 99°. Still some dulness in the left side, between the clavicle and second rib, but the pulmonary disease is evidently at a standstill. She passed the winter without any material change in the lung disease, but, owing to the cardiac and laryngeal complications, she is much troubled with cough.

Case LXIII.—Soon after her return to Aiken it was discovered that, in addition to the pulmonary affection, she was suffering with parenchymatous nephritis. She died of the latter affection a few weeks after her arrival.

Case LXIV.—Passed the summer at Bethlehem, N. H., where he continued to improve.

November 26th.—Pulse, 94; temperature, 98.7°. Has a good color, weighs 124 pounds, walks four miles without being fatigued, coughs a little, bringing up a small quantity of muco-purulent expectoration. Over the right side the area of dulness extends in the front to the third rib, and behind over the supraspinous fossa. Expiratory murmur prolonged over the upper portion of the lung.

May 2d.—Has been very imprudent, going out at all hours, and taking but little care of himself; but, notwithstanding this, he continued to improve. Pulse and temperature are normal. The cough, which for two weeks had disappeared entirely, has returned in consequence of imprudent exposure. The dulness in front is unchanged, but behind there is no trace of it. His appearance is that of a man in perfect health.

On looking over the above cases it will be seen that the improvement has been more or less permanent in the great majority of them, and that periods ranging from one to six years have passed without any relapse. Many others are doing well at their homes, but, as they did not return to Aiken, are omitted in this report.

Case LXX.—Male, forty-six years of age, patient of Dr. A. B. Whitney and Jno. T. Metcalfe, of New York. Hereditary tendency, mother and one aunt having died of phthisis. Six years ago had diarrhœa for six months, and has had a similar attack every year since that period. In the autumn of 1879 he began to cough at night, but it was not until July of the following year that it became persistent. Hemorrhage on August 5th of the same year. Has had night-sweats, and has lost sixteen pounds in weight.

November 1st.—Pulse, 92; temperature, 100; weight, 132. Color pale, digestion wretched, and can take but little in the way of food or medicine. Has tried malt and cod-liver oil, but has never been able to continue their use longer than a day or so at a time. Even the preparations of the hypophosphites have disagreed with him. Expectorates eight ounces, but can lie on both sides. Right front dull from clavicle to third rib, with bronchial respiration and prolonged expirium, at one point cavernous in character. Marked bronchophony. Right back dull under upper half of scapula and over corresponding interscapular space. Respiration bronchial, with very distinct bronchophony. In addition to his pulmonary disease the patient suffers with nervous prostration and is much depressed in spirits.

January 17th.—Pulse, 86; temperature, 98.6; weight, 138 pounds, a gain of 6 pounds. In addition to the area of dulness previously mentioned as extending in front to the third rib, there is diminished resonance lower down. Posteriorly there is now no evidence of dulness below the spine of the scapula.

March 1st.—Pulse, 104; temperature, 98.8°; weight, 140¾ pounds, an increase of 8¾ pounds since his first examination, of 9¾ pounds since his arrival in Aiken. The dyspepsia and diarrhœa, which had greatly improved, are again troublesome.

April 26th.—Pulse, 81; temperature, 98.7°; weight, 140¼ pounds. Physical symptoms have undergone no change since January 17th.

Result.—Marked improvement, diminution in the extent of the infiltration, and an increase in weight of 8¼ pounds since his first examination, and of 9¾ pounds since his arrival in Aiken.

Case LXXI.—A young lady, nineteen years of age, patient of Dr. North, of Waterbury, Conn., consulted me at Bethlehem, N. H., in September, and by my advice came to Aiken. Her father died of consumption, and she herself has had repeated attacks of bronchial catarrh. Has also suffered with malarial poisoning. Has had cough for some time past, and has lost twenty pounds in weight, and her appearance is decidedly chlorotic.

November 9th.—Pulse, 96; temperature, 100.4°; weight, 139 pounds. Has some cough and expectorates two drachms of greenish yellow sputa, all of which floats. Right front dull from clavicle to the upper border of third rib.

Respiration bronchial, with prolonged expirium. Right back dull under supraspinous fossa. Respiration as in front. *Bruit de diable* over jugular vein.

January 28th.—Pulse, 96; temperature, 98.6°; weight, 150 pounds, a gain of 11 pounds since her arrival in Aiken, and of 17 pounds since treatment was commenced. Cough reduced to a few hacks in the morning, without any expectoration. Color much improved. The area of dulness in front is reduced to a triangular space, with the clavicle as the base, and the junction of second rib and sternum as the apex. Respiratory murmur feeble, with audible expirinm. Posteriorly the only evidence of disease is somewhat diminished resonance under the supraspinous fossa.

February 13th.—Weight, 153 pounds, a gain of 14 pounds in as many weeks.

May 9th.—With the warm weather of spring there has been a slight reduction in weight, but she still weighs 151½ pounds. In every other respect the improvement above noted has been maintained.

Result.—General improvement, amounting to arrest of the process; diminution in the extent of the infiltration; cessation of the cough—the occasional hack in the morning scarcely deserving that name—and great increase in weight.

Case LXXII.—Male, twenty-eight years of age, Dr. Wm. C. Ravenel, Charleston, S. C. Very pronounced hereditary predisposition, father, brother, and other relatives having died of consumption. Began to

cough in the winter of 1877–78; spent the following summer at Asheville, N. C., where he improved. Returned to Charleston, and there relapsed. Has lost from twenty to twenty-five pounds. Has had several slight hemorrhages. Has been in Aiken three weeks and has improved in strength, but has gained nothing in other respects. Had an attack of dengue a month ago, and was greatly prostrated.

November 5th.—Pulse, 128; temperature, 101.8; present weight, 98 pounds; is greatly emaciated; looks wretchedly, and is evidently in the last stages of the disease. Extensive infiltration, involving the upper portion of the right lung and extending as low as the sixth rib in front, and to the angle of the scapula behind. Has no appetite for food, and suffers with severe colicky pains after eating. This case, evidently a hopeless one, declined steadily, and terminated fatally on January 2d.

Case LXXIII.—A young colored man, twenty-three years of age, of phthisical family and dissipated habits, began to cough last winter, but did not relinquish his occupation, that of a hotel-waiter, until the following spring. He lost flesh rapidly, but, instead of seeking medical advice, dosed himself with various quack medicines. Cough has been persistent, and has had profuse night-sweats.

October 27th.—Very pale; greatly emaciated; finger-nails clawed; cough very troublesome, with abundant expectoration, a large proportion of which sinks to the bottom when the vessel contains water. He is so weak as to be unable to cross the room without assistance. His general appearance seems to indicate a fatal termination within a week, or, at the utmost, a fortnight. The unfavorable outward aspect of the case was more than confirmed by physical examination. On left side, dulness from clavicle to third rib, with *bruit de pot fêlé*; respiration cavernous, with moist râles over the apex, and distinct metallic tinkling. Right side: respiration harsh, with prolonged expirium. The case was so unpromising that I hesitated about subjecting him to any regular treatment, and it was only at the urgent request of his mother that something should be done, that I prescribed the usual remedies.

December 8th.—Has improved in color; has gained 10 pounds in weight, and is able to take long walks in the adjacent woods; coughs less, and with corresponding diminution in the amount expectorated. Lulled into security by his marked improvement, he soon began to grow careless and neglected himself. I did not see him again until April 3d. He was then very weak, and died within a few days after my visit. This case is worth noting as affording proof of the beneficial effects of treatment, even in seemingly desperate cases. I remember well his stating that he felt better from the time he took the first doses of the hypophosphite of lime. There is but little doubt that with more favorable surroundings his life might have been prolonged for several years.

Case LXXIV.—A young man, nineteen years of age. Dr. F. P. Porcher, Charleston, S. C. Father died of phthisis. Had in August, while residing in a malarial region, on the coast of South Carolina, what was supposed to be remittent fever, but which was attended with cough, sweats, and rapid emaciation. On his arrival in Charleston, was examined by Dr. Porcher, who is reported to have pronounced it to be a case of pulmonary infiltration, with pleural effusion. His temperature has ranged from 101° to 103°, with occasional chills, without any regularity in their occurrence.

September 24th.—Pulse, 88; temperature, 102°. Has persistent cough, with muco-purulent sputa. On the right side there is dulness in front, extending from one inch below to mamma to the liver. The superior border of this area of dulness extends across the axilla to a point corresponding to the angle of the scapula. The percussion-sound is decidedly dull, but not flat as in pleuritic exudation, nor does change of posture cause any alteration in the character of the dulness. Intercostal spaces well defined, and without the bulging observed in fluid exudations. I accidentally omitted to note the character of the respiration, but remember that the respiratory murmur was distinctly audible, although more faintly so than on the left side. During October the fever gradually declined, and toward the middle of the month the cough abated, and finally ceased altogether. The area of dulness remained unchanged, but there was a marked improvement in his general health, his weight rapidly increasing from 119 pounds on the 19th to 131½ pounds on the 28th, a gain of 12½ pounds in nine days, or at the rate of over a pound a day.

November 19th.—Pulse, which has hitherto ranged from 104 to 112, is now only 88, and the temperature has declined to 99°. He eats enormously, and his weight has steadily increased, being to-day 147 pounds, a gain of 28 pounds in one month. The dulness in front is unchanged, but behind it has dropped to a line one inch below the angle of the scapula. The respiratory murmur over the region of dulness is feebler than on the left side. From this time to the date of his departure there was but little change in his condition, except a gradual diminution in the extent of the dulness. When last examined (May), the upper border of dulness in front had receded to the seventh rib, while behind it had disappeared entirely.

Remarks.—The rapid improvement of the patient and the rather unusual location of the dulness would at first sight lead one to suppose that the diagnosis of phthisis in this case was incorrect, and that it was either a pleuritic exudation or some disease of the liver. The fact that the dulness, although well marked, was by no means flat, and that the respiratory murmur, noted as feeble, was, nevertheless, audible over the whole of the base of the lung, are sufficient to exclude any fluid accumulation, or any great enlargement of the liver or tumor of that organ. Besides this, the location of the dulness was not influenced by change from the erect to the recumbent posture. There was no icterus or any other evidence of hepatic disease.

Case LXXV.—Female, aged twenty-nine. Drs. Craig, of Manchester, O., and Murphy, of Cincinnati. Maternal heredity — her grandfather, a brother, and a sister, having died of phthisis. Has had a persistent, hacking cough since last February, with little or no expectoration until two weeks ago. It has since then been once streaked with blood. Previous to the beginning of the cough she had been greatly reduced by nursing a sick sister.

November 5th.—Pulse, 82; temperature, 100.7; weight, 130 pounds; quite pale. Cough troublesome, with four ounces muco-purulent expectoration, all of which floats. On the right side there is dulness extending in front from the clavicle to third rib. Respiration bronchial, with prolonged expirium; conducted heart-sounds. Behind, the dulness is confined to the suprascapular region.

December 13th.—Pulse, 84; temperature, 98.7°;

weight, 140 pounds. Cough, which had nearly disappeared, has returned, but is not severe.

January 27, 1881.—Pulse, 84; temperature, 98.5°; weight, 141 pounds, a gain of 11 pounds. Walks two miles without experiencing fatigue. Has a fair appetite and good digestion. Cough reduced to an occasional hack, and without any expectoration. The dulness in front extends only to the upper border of the second rib. Over the back it is still evident over the suprascapular region. Respiration rough, with prolonged expirium. Up to this date she had improved steadily, had gained eleven pounds in weight, her color had returned, the cough had all but ceased, and there was every reason to hope that the disease had been arrested. During the month of February she imprudently exposed herself, brought on an attack of partial pleuritis, followed by increase of cough, fever, etc., and in the course of a few weeks lost all she had previously gained, and upon examination it was found that the disease had extended.

Result.—Marked improvement during first three months, with subsequent relapse and extension of the disease.

Case LXXVI.—A recently married lady, aged twenty-one, patient of Dr. J. D. Kenyon, of Providence, R. I. Mother died of phthisis. Disease began in June, 1879, with sharp, pleuritic pain and loss of flesh to the extent of nine pounds. Hæmoptysis on July 28th, with return of pain and loss of flesh to the extent of nine pounds.

December 4th.—Pulse, 92; temperature, 98.5°. Of small stature and delicate appearance. *Has never had cough.* On the left side there is distinct dulness, extending from the clavicle to the fifth rib in front, and also in the axillary line to a point on a level with the angle of the scapula. Respiration bronchial, with distinctly audible expiratory murmur. Posteriorly the dulness reaches as low as the angle of the scapula. I did not have an opportunity of making another examination; but when she left, in the spring, she was much improved.

Case LXXVII.—Married; thirty-two years of age. Dr. Fisher, of Hoboken, N. J. Has lost one brother and two sisters with consumption. When seventeen years of age she had typhoid fever, and ever since then has been subject to repeated attacks of cough. In August, 1880, the cough became persistent. Has lost fifteen pounds in weight.

November 17th.—Pulse, 100; temperature, 101.6°; weight, 104 pounds, three of which she has gained since her arrival in Aiken. Very anæmic; is excessively nervous, and suffers with dyspepsia; has cough, and expectorates one ounce, consisting chiefly of mucus, most of it being brought up in the morning. Dull on the right side from the collar-bone to third rib, with diminished resonance thence downward. Behind, there is a limited area of dulness in the interscapular space between the middle of the shoulder-blade and the vertebral column. The respiratory murmur is feeble over both front and back. Over the left lung a few sibilant râles are audible.

December 27th.—Patient has had an attack of articular rheumatism, lasting three weeks, with high temperature and loss of appetite, and is evidently much weaker and more emaciated. From this date there was some improvement in her general health, but no change in the character or condition of the local symptoms.

Case LXXVIII.—Female; forty-one years. Dr. J. F. M. Geddings, of Charleston, S. C. Mother and husband died of phthisis. Has had more or less laryngeal catarrh for several years, but no serious trouble until 1880, when she was attacked with influenza, which was then epidemic. Since that time the cough has been persistent, and has been accompanied with loss of weight (twelve pounds), night-sweats, and pleuritic pains. In the month of June she visited Bethlehem, where I examined her. Pulse, 100; temperature, 99.8°. There was dulness over the upper portion of the right lung, between the clavicle and third rib in front and under the suprascapular fossa behind. The respiration was bronchial, with prolonged expirium. Her weight at this time was 96 pounds. She improved rapidly, and at the time of her departure she had gained four and three-fourths pounds. Instead of going to some dry station in the interior, she remained a month in New York, gaining a little more weight at first, but soon losing it again. The cough became more troublesome, and the night-sweats returned.

November 20th.—Pulse, 96; temperature, 100°; weight, 102. Cough not very frequent, with a moderate amount of muco-purulent sputa, all of which floats. Voice is a little husky. The area of dulness is unchanged, but under the second rib the respiration is cavernous, with pectoriloquy.

April 8th.—Pulse, 96; temperature, 98.5°; weight, 108 pounds, a gain of 6 pounds since her arrival in Aiken, and of 12 pounds since she began treatment. Notwithstanding this improvement in her general health, there has been a slight extension of the disease downward, the lower border of the infiltration now extending to the fourth rib.

Result.—General health improved. Extension of the pulmonary affection.

Case LXXIX.—A young lady, twenty-one years of age, a patient of Dr. Chapman, of New Haven. One brother and a sister have died of phthisis. Has had cough since August, 1880, during which time she has lost nine pounds in weight.

November 22d.—Pulse, 130; temperature not noted; weight, 110 pounds. Very fair complexion, with slender figure and delicate appearance. The appetite is good and the digestion fair. Walks two miles without becoming fatigued. Cough not troublesome; muco-purulent in character: about one ounce in twenty-four hours, all of which floats. Has night-sweats. Right side dull from clavicle to third rib. Respiration bronchial over the area of dulness, except below the clavicle, where it is cavernous. Behind, there is dulness over suprascapular region, with diminished resonance lower down. In this situation the respiration is bronchial. The history of this case is one of slow, but uninterrupted decline. When she left Aiken, in the month of May, she had lost eleven and three-fourths pounds; cough and expectoration had increased; the dulness had extended over the greater portion of the front of the chest, while behind it reached to within an inch of the angle of the scapula.

Result.—Extension of the disease, with loss of weight to the extent of eleven and three-fourths pounds.

Case LXXX.—Male, twenty-four years of age. Drs. Max Brock and Carl Heitzmann, of New York. No hereditary predisposition to consumption. Disease began with bronchitis, in June, 1877, but cough did not become persistent until September, 1880. Went to Sullivan Co., N. Y., and returned apparently well, but soon relapsed. Has had three attacks of hæmoptysis, and has lost twenty pounds.

November 22d.—Pulse, 102; temperature, 100.2°; weight, 134 pounds. Slight exertion, such as ascend-

ing stairs, causes dyspnœa. Appetite and digestion good. Cough slight, with four ounces of muco-purulent expectoration. Has night-sweats. On the *right side* there is dulness posteriorly over the supra-scapular and over half of the scapular region. On that side, over both back and front, the respiration is bronchial. Over the upper portion of the *left* lung there is another area of dulness occupying the supra-clavicular, the clavicular and mammary regions, as low as the third rib, with diminished resonance to the sixth. Respiration bronchial.

May 19th.—Pulse, 84; temperature, 98°. Patient's improvement has been almost uninterrupted. He has the ruddy hue of health, and his weight has increased to 140½ pounds. Appetite and digestion are excellent. The cough has greatly improved, and the expectoration is reduced to one ounce, or to one-fourth of what it was at his first examination. Walks five miles without being fatigued. On the right side the suprascapular and upper half of the scapular region have become resonant, the dulness being now confined to the lower half of the scapular and corresponding portion of the interscapular regions. The respiration has lost its bronchial character. On the left side the dulness has entirely disappeared, but the respiration is still bronchial. He remained at Aiken fourteen days longer without any further change other than the loss of a couple of pounds, caused by the increasing heat of spring.

Result.—Great improvement in the general as well as local symptoms, cessation of all activity in the disease, as evidenced by the absence of any rise in temperature above the normal during the last three months of his residence. Clearing up of the left lung and diminution in the extent of the disease in the right lung. A gain of six and one-half pounds of flesh, increased strength, and great improvement in cough, with corresponding reduction in the amount expectorated.

Case LXXXI.—Male, twenty-nine years of age; single. Dr. H. O. Marcy, of Cambridge, Mass. Strong hereditary predisposition on both sides—grandfather, father, two aunts on the father's side, and one maternal uncle, having died of phthisis. His brother also had the same disease and removed to Minnesota. Patient, who resembles his father, is slightly built, and presents a pale, unhealthy look. In October, 1879, he had an attack of pleuritis. The effusion was absorbed, but he continued to cough and lost flesh to the extent of twenty pounds.

December 13th.—Pulse, 108; temperature, 99.7°; weight, 114½ pounds. He looks very ill, and the slightest exertion causes dyspnœa. Appetite poor and digestion not very good. Cough at times troublesome; expectoration one and one-half ounce in twenty-four hours. Extensive disease of the right lung, the dulness in front extending to the third rib, and behind to the angle of the scapula. Respiration bronchial, with abundant moist râles. The left lung is also affected, but not so extensively as the right, the area of dulness being confined to the apex above the second rib. Mucous râles everywhere audible. The strong hereditary predisposition in this case, the great extent of the disease, and the poor general health of the patient, precluded all hopes of arresting the disease. On leaving for home, on April 21st, he had lost five pounds more. In addition to the dulness observed over the anterior surface of the left lung, an area of diminished resonance had developed itself over the scapular region. On the right side the symptoms are unchanged.

Case LXXXII.—A married lady, a patient of Dr. Holcomb, of Lennox, Mass., twenty-four years of age, whose father died of consumption. Had diphtheria seven years ago, and ever since then has suffered with cough during the winter. Since last June the cough has been persistent, and has been attended with high temperature, night-sweats, and loss of flesh to the extent of twenty-five pounds.

November 21st.—Temperature in the forenoon, 97.5°, but very high later in the day; pulse, 112. Is very pale and moves about with great difficulty, the slightest exertion causing shortness of breath. The thorax is very small, with prominent sternum (chicken-breasted). Both lungs extensively diseased. Her general appearance is that of a person in the very last stage of the disease. Notwithstanding her unfavorable symptoms, the change of air produced a marked improvement in her condition. The fever declined, the strength improved, and the cough became less troublesome. With the exception of occasional slight tinging of the expectoration, she did well until toward the close of January, when she began to decline, and died a few weeks later.

Case LXXXIII.—Male, aged forty-eight. Dr. Raney. Family history not noted. Has had an occasional cough for twenty-seven years. Four years ago it became persistent. Had an attack of pleuro-pneumonia in January, 1879. Has at times observed a few specks of blood in his sputa. Has had night-sweats.

November 29th.—Pulse, 108; temperature, 100°; weight, 147 pounds. Slight exertion causes dyspnœa; appetite fair, and digestion good. Expectorates about four ounces of muco-purulent matter. Over the right lung there is dulness in front from the clavicle to second rib, with diminished resonance to fourth. Behind, the dulness is confined to the supra-scapular region. Respiratory murmur feeble. This patient improved rapidly, but, after remaining in Aiken six weeks, thinking that he could do still better, went farther south. The move proved a most disastrous one. On his return in the month of March, his condition was most deplorable; his weight had declined to 143 lbs.; his pulse had risen to 116, and his temperature to 102.2°. His dyspnœa had increased, the cough had become more troublesome, and the expectoration more profuse. Physical examination showed that the disease had extended, and that a cavity had formed. He afterward rallied, but up to the time of his departure did not regain what he had lost by his ill-advised trip.

Result. — Improvement — relapse — renewed improvement.

Case LXXXIV.—A married lady, aged forty-two. Dr. A. H. Nichols, of Boston. Hereditary predisposition. Last August she began to cough, had daily chills, followed by fever, and lost flesh rapidly. On examination, it was found that the apices of both lungs were affected. She visited Rye Beach, and while there improved rapidly, but lost ground again on her return to Boston.

December 2d.—Pulse, 124; temperature, 102°; weight, 110 pounds. Looks wretchedly; skin sallow and almost bloodless. Is excessively nervous, and so weak that the slightest exertion causes attacks of dyspnœa. Has daily exacerbations of fever, from which she is only free during a few hours in the morning. Cough troublesome, with profuse expectoration. Left side dull from above the clavicle to third rib in front, and under supraspinous fossa behind. Respiration bronchial, with prolonged expirium. Right side, diminished resonance in front and dulness over the scapular and interscapular space, with bronchial

breathing. This case, from the first a hopeless one, gradually grew weaker, and after a residence of ten weeks it was decided to take her home.

Result.—Gradual decline.

Case LXXXV.—A naval officer, thirty-two years of age, from Norwich, Vt. Family history not noted. On the return of his ship from the tropics, he was exposed to rough, cold weather in New York harbor, which brought on an attack of broncho-pneumonia. He lost over ten pounds, and had several hemorrhages.

December 5th.—Pulse, 106; temperature, 101 ; weight, 114 pounds. Is very thin, and presents the appearance of a very sick man. There is marked dulness over the whole right lung in front, and posteriorly over the upper two-thirds. In front the respiration is bronchial, except under the second rib, where it is distinctly cavernous. On the left side no dulness, but loud, sonorous ronchi, intermingled with moist râles. Cough very troublesome and almost incessant.

February 17th.—This unpromising case, after two months' confinement to his room, during which he suffered terribly with his cough, began to improve about the end of January. His pulse is now 98, and his temperature normal. His color is fresh and healthy; his strength is so much improved that he walks three miles in the course of the day without experiencing any fatigue, and mounts two flights of stairs without becoming short-breathed. Coughs but little, and then only in the early morning, at which time he raises only a few pellets of mucus. In front there is no change in the physical symptoms, but behind the upper portion of the lung has cleared up and is now resonant.

May 26th.—Pulse, 96; temperature, 98.5 . The improvement noted above has continued. Patient looks remarkably well, and is in excellent spirits. He now weighs 125¾ pounds, a gain of 11¾ pounds; has gradually extended his promenades, and can now walk two miles consecutively. Coughs only a little in the morning, while dressing. The improvement in the case was all the more remarkable on account of its being due to climate alone, as he took neither oil, malt, hypophosphites, or any medicine other than such as was administered to allay his troublesome cough.

Result.—Great improvement in a case in which, from the extent of the disease and the unfavorable condition of the patient, there was no rational ground to expect anything other than a speedy decline.

Case LXXXVI.—A young lady patient of Dr. Dearborn, of Nashua, N. H., and of Dr. F. I. Knight, of Boston; twenty-seven years of age, and of a consumptive family, her mother and sister having lately died of pulmonary phthisis. Commenced coughing last May; had fever, night-sweats, and lost six pounds in weight. She visited Bethlehem, N. H., and while there improved and gained ten pounds.

December 7th.—Pulse, 88; temperature, 99 ; weight, 126 pounds. Has been losing ground since she left Bethlehem. Looks badly and is much depressed. Over the right front there is diminished resonance, and behind an area of dulness corresponding with the lower half of the scapula and extending toward the axillary line. Respiration feeble, with prolonged expirium; conducted heart-sounds distinctly audible. Posteriorly, in addition to these symptoms, there are sibilant and moist râles. On the left side there is dulness over the suprascapular region, with mucous râles in front and feeble respiration behind.

December 23d.—Has improved in general appearance, and has gained four and one-half pounds.

April 2d.—Did well until the middle of January, at which time the digestive organs became deranged and she began to lose in weight. The pulse became more frequent, and the temperature higher. Since then she has continued to grow worse. Physical examination reveals extension of the disease in the right lung.

Result.—Extension of the disease and loss of weight.

(To be continued.)

SPASMODIC NEURALGIA

Of Nearly Three Years' Standing, Relieved by Correction of Spasm of the Ciliary Muscles and by Circumcision.

By FRANCIS H. RANKIN, M.D.,

NEWPORT, R. I.

The importance of removing peripheral irritation is so markedly shown in a case which has recently been under my care, that I deem it of sufficient interest to present it to your readers.

The case about to be detailed is that of a little patient belonging to a very neurotic and highly cultivated family. His father died from apoplexy; his sister died suddenly, after suffering for several weeks from severe neuralgia about the head; a brother was at one time an inmate of an insane asylum; an uncle is at present in a similar institution; and other members of the family show strong neurotic tendency. With a knowledge of this diathesis in the family of our patient, we can readily comprehend the effect produced upon him by peripheral irritation.

He is twelve years of age, a bright, intelligent, handsome little fellow, with every appearance of being in the most robust health. A little more than three years ago he had typhoid fever, and three months after recovering, he began to suffer from neuralgic headaches, which, four months subsequent, developed into neuralgia of very intense character, affecting at first the head, then extending to the back, through the diaphragm, stomach, and other parts of the body, accompanied by sharp lancinating pain in the eyeball, with marked congestion of the ocular conjunctiva. The little patient was confined to the house during the greater part of the winter of 1878–79, the neuralgia being of almost daily occurrence, and at times of the most agonizing and seemingly alarming form. He was seen by several of our most prominent New York physicians, who pronounced the neuralgia to be of malarial origin, and, so far as I am informed, treated it as such, using, in addition to the anti-malarial treatment, galvanism.

The following eighteen months were spent in Europe, during which time he was rarely free for more than a day at a time from some neuralgic pain in his head or back, and while in Paris he had an alarming seizure.

In the fall of 1880 he returned to New York, and, shortly after his arrival, the neuralgia became of more frequent occurrence and much more severe in character. The eyes were markedly congested, and the little fellow was unable to read on account of the pain which it produced. For this condition, quinine in large doses was given. During the winter, notwithstanding frequent and severe attacks, the patient's general health was excellent; he was

bright and lively, and able to go about when not suffering. The attacks would keep him in bed for several hours, and were generally relieved by one of the bromides. When a particularly severe attack was threatened, he would take, in addition, eighteen grains of quinine in the course of a day.

Early in the past spring he came to Newport, and at first appeared not to suffer to any greater degree than in New York. His appetite was good, he slept well, and he was bright and playful.

On June 5, 1881, I saw him for the first time professionally. I found him in bed, suffering with the most excruciating pain in the back, running through the stomach, causing him to assume the position of marked opisthotonos, and which then would shoot up into the head, neck, and right eye. The seizures were of a spasmodic character, lasting from fifteen to twenty seconds; they were followed by visions of terror, when he saw devils and other terrible things, from which he shrank in the greatest fear, and clung for protection to those near him. This fear lasted for a few seconds, and was immediately followed by visions of splendor, in which he saw angels and everything beautiful. Then a condition of relaxation, or apparent collapse, would set in, during which time he appeared not to breathe. On coming out of this he would gasp for breath, ask to be fanned, give a long sigh, and then feel perfectly well. During this visionary stage, he was perfectly oblivious to everything about him, and on returning to consciousness had no recollection of his visions. This whole seizure lasted one and one-half to two minutes, and was followed by a period of from two to five minutes of perfect comfort, with the exception of great nausea. The eyes were highly congested; the temperature was normal; pulse a little accelerated, but, even during the periods of pain and unconsciousness, was always regular and good; tongue coated; breath foul; stomach irritable, with frequent and profuse vomiting. The condition of his stomach seemed to depend upon a vicious diet in which he was allowed to indulge. These seizures, just described, continued for three days, with the exception of a few hours at a time while under the influence of morphine. Bromide of potassium, which the patient had taken formerly in large doses for similar attacks, could not be given by the mouth on account of the irritability of the stomach. Chloral and bromide were given by the bowels, but they produced so much discomfort that they were not frequently repeated. This whole attack ceased almost magically after a dose of calomel, gr. vii., with soda bicarbonate, gr. xx., which produced free purgation, with entire subsidence of all the above-mentioned symptoms. There was, throughout the seizure, a very marked hysterical element. We found it necessary to exclude all members of the family, as their presence intensified a seizure, or brought one on if he were in repose.

Dr. Wm. T. Lusk kindly saw the patient with me, and assisted very materially in attending the little sufferer, who required almost hourly attention during the three days.

Subsequent to this attack, his diet was regulated, and strychnine and Fowler's solution ordered. During the next two weeks he had only a slight amount of pain. Three weeks from the last outburst another seizure occurred, which was promptly checked by calomel and soda, as before, and then, in addition to giving the strychnine and arsenic, I applied galvanism to the spine. While making his visits to my office, I discovered grave defects in the patient's vision, and then it occurred to me that the neuralgic condition might be due to reflex irritation, and not to malaria or central lesion. The former cause—malaria—I had doubted from the first, although it had unquestionably been an important factor in creating a great nerve-disturbance in this very neurotic patient, and the peripheral irritation about to be described had prevented the nervous system from regaining its balance. On finding this defect of vision, which apparently depended upon an error of refraction, I requested that Dr. D. B. St. John Roosa, who was at that time in Newport, should see the patient.

While consulting with Dr. Roosa, we discovered that the patient had considerable irritability about the glans penis—an itching, as he described it—which caused him to put the member occasionally in water. An examination revealed an elongated prepuce, which could be retracted over the glans only with difficulty, and with considerable pain; the glans itself was of an olive shape, with a decided redness of the meatus. I then gave my opinion to the family that circumcision was necessary, and that the neuralgic pain was caused by the irritation at the penis, together with the error of refraction, Dr. Roosa and I supposing that the defective vision was due to spasm of the ciliary muscles.

Dr. Roosa reports upon the case as follows:

"When Dr. Rankin and I examined the patient, as to his eyes, we found an apparent myopia. The ophthalmoscope, however, did not bear out this diagnosis. He seemed, on the use of the ophthalmoscope, to be myopic in one meridian, and hyperopic in the other (mixed astigmatism). On the use of atropia—a four-grain solution—we discovered that the true error of refraction was hyperopic astigmatism, which was corrected so that his vision became $\frac{20}{15}$. Before the use of atropia his vision was $\frac{8}{200}$. This was somewhat increased by *concave* glasses. The patient, therefore, was found to be suffering from spasm of accommodation, and this of a high degree. The use of atropia and of the glasses was of marked service in diminishing the redness and pain in the eyes, and in producing general comfort. But the effect of the drug was not sufficient to enable us to say that the boy was well. When we discovered the phymosis, on first examination of the refraction, we supposed that it had some part in causing the neuralgic seizures. The relaxation of the ciliary muscle was only one of the factors necessary to be set at work for a cure. The other proved to be the relief of the phymosis, and, with it, of the urethral irritation."

At the request of the family, Dr. John P. Gray, of Utica, saw the patient, with Dr. Roosa, Dr. Lusk, and the writer, and it was unanimously agreed that circumcision was highly important.

The operation was, however, delayed for some time till the error of refraction was corrected, and while waiting, another seizure of neuralgia occurred, and two days subsequently (August 12th), with the kind assistance of Dr. Roosa and Dr. Lusk, I performed circumcision. The wound healed kindly, and in little more than a week the patient was bathing in the ocean, and feeling perfectly well.

Since the operation, the patient has felt brighter and stronger than he has in three years, and a very marked change in the boy's bearing has been noticed by his family. He is now taking no medicine, and since the day circumcision was performed, he has, with the exception of two days, when he suffered a return of his old pain, after an exposure on the water

all day in a hot sun, which brought on marked conjunctivitis, been entirely free from his former neuralgic seizures.

Remarks.—From a review of this case, two prominent points are noticed: 1st, that cessation of the general neuralgia followed the relief of the ciliary spasm by the use of atropia; 2d, that this freedom from neuralgia did not continue, and was not complete, till after the operation of circumcision. We might also add two other noticeable facts. They are the following: 1st, before the operation, and the correction of the error of refraction, whenever there was an unusual outburst of neuralgia, there was always great gastric disturbance, on the relief of which there would be a cessation of the neuralgia; 2d, a fact which is perhaps not shown clearly enough in the account given, that the little patient has an unusually sensitive and sympathetic temperament, and in all the seizures there was a marked hysterical element.

The anatomical conditions, phymosis and astigmatism, were present in this case in a highly neurotic patient. They were apparently sufficient in his case to decidedly affect the general system.

That the same defects might exist in other boys who had not a neurotic diathesis, without inducing similar results, is not denied.

December, 1881.

Rupture of the Omentum with Strangulation of the Intestines.—Dr. W. E. Guthrie, of Bloomington, Ill., sends us the history of the following unique case:

"A large, robust man, aged forty years, who had been healthy, except for two previous attacks of peritonitis, was taken, October 14th, with intense pain in the epigastric and umbilical regions. Vomiting occurred early, and the third day became stercoraceous in character, and so remained till death. Tenderness upon pressure was at first confined to the umbilical region, but two days later became general over the abdomen. Tympanitis marked. He lost strength and emaciated rapidly, and after eight days of severe suffering, died. The question of gastrotomy was several times broached; but, as the symptoms were almost entirely those of intussusception of some portion of the small intestine, the operation was not considered justifiable.

Autopsy showed the following conditions: The peritoneum was largely congested. The omentum was about one-half its usual length, very thin, and its lower border irregular and in shreds, giving evidence of having been torn. This caused a search for the remaining portion, which was found adherent to the peritoneum in the lumbar region and to the right of the mesentery. Through two apertures in the detached portion of the omentum had passed loops of the ileum, the latter being gangrenous at the points of constriction, and its free portions largely distended with gas."

Dr. Guthrie queries whether the omentum did not become attached to the lumbar peritoneum in the first attack of peritonitis, and being then, in the second attack torn asunder.

Prescribing for Croup by Telephone.—A physician of North Adams, Mass., is said to have successfully diagnosed and treated a case of croup, two miles away, by the help of the telephone. The croupy cough of the child was distinctly transmitted.

Reports of Hospitals.

THE USE OF PLASTER OF-PARIS IN FRACTURES.

Plaster, either in the form of a bandage enveloping the fractured part, or in the form of a distinct splint, is used quite extensively in the various hospitals of this city. In fact, all other things being equal, it is given the preference over other forms of apparatus usually employed in such injuries. Particularly is this the case with fractures of the leg, which are treated now almost exclusively by this bandage. The fracture-box is rarely used, and only in exceptional cases, where there is great swelling, and under conditions of extensive injury of the skin, in which it is necessary for the parts to be exposed during treatment. Generally this open method is only employed until such time as it is safe to apply the plaster-of-Paris bandage, as shown by the disappearance of the swelling and the healing of the abrasions. No time is lost in so doing, as generally the parts are made fit for the immovable apparatus before the bony union commences. In compound fracture the limb is generally placed at once in the plaster apparatus, openings being made in the latter corresponding with the injuries of the soft parts, for the purpose of establishing thorough drainage. As a rule, and when, of course, there is no special contra-indication in the shape of undue swelling, etc., all fractures in which plaster-of-Paris is to be employed are "put up" at once. A general description of the method of procedure may apply to that to be employed in any case of fracture in any region of the body. The part is enveloped in a thin layer of cotton and the bandages, immersed in water sufficiently long to be permeated, are applied directly over the cotton, care being taken to exert slight and uniform pressure. Each layer of bandage is carefully moulded to the inequalities of the surface, and made perfectly smooth before the next layer is applied. If the bandages are properly prepared, without sizing, and have been kept in a dry place, the plaster will commence to "set" before the second bandage is applied. Generally three layers of bandage are sufficient for a fracture where ordinary support is required. Four, with suitable reinforcements, may be required in other cases. After the dressing is complete, it is exposed to the air, and hardens sufficiently in two or three hours to allow the limb to be moved.

The plaster apparatus is generally kept in position during the whole period of treatment. If undue swelling occurs, the envelope is slit in the long axis of the limb by a Hays saw, or by a scissors for the purpose, and thus a splint is formed which is kept in position by outside bandages.

Some surgeons prefer to dispense with cotton altogether, and use a well-fitted silk or gauze stocking or jacket as the foundation for the plaster. There is, however, greater care and skill required in this method, as any undue pressure at any one point would be more apt to produce swelling in the parts beyond. Yet still, when properly applied, this makes the most comfortable and lightest dressing that can be used, and gives the perfection of support and greatest accuracy of adjustment to the injured parts.

Progress of Medical Science.

Seat of the Parasites in Leprosy or Elephantiasis Græcorum.—MM. Corni and Suchard (*Union Médicale*, September 29, 1881) have published the results of their researches in regard to the character and seat of the parasite upon which the pathological processes constituting elephantiasis depend. Their investigations were made upon specimens taken from living leprous patients, and examined before decomposition had begun. They found the leprous tubercles to consist of an infiltration of the papillæ and of the cutis vera with very abundant round, spheroidal, or lenticular bodies, that were hypertrophied white blood-corpuscles. In the middle of the tubercles the papillæ were indistinct, while the sweat-glands and hair-follicles were greatly atrophied. The epidermis was thinned and smooth. The vascular walls were hypertrophied, particularly in their intima. With a magnifying power of 500 or 1,000 diameters, small ovoid or elongated, highly refractile, rose-colored bodies were seen in the protoplasm of the hypertrophied lymphoid cells of specimens colored with carmine. These are the parasites associated with leprosy. They may be studied in a fresh piece of the tubercle, removed from the living patient and teased apart in water. They are either spherical or rod-shaped, and propel themselves in curved lines. Permanent specimens are prepared by successively placing thin sections in a forty per cent. solution of alcohol, in absolute alcohol, and in a one and one-half per cent. coloring solution of methyl-violet. The sections are then treated with a one to four per cent. solution of bicarbonate of sodium, with absolute alcohol and the oil of cloves, after which they are preserved in Canada balsam. In successfully prepared specimens the parasites in the cells are colored deep blue, while the protoplasm of the cells and the connective-tissue corpuscles are colorless. Immersion objectives are preferred for the study of these specimens. The rod-shaped parasites are arranged in bundles. This is due to the action of the alcohol. The spheroidal parasites are aggregated or isolated. Very few parasites are found outside the cells. The epidermal cells, although thinned, contain no parasites, and seem to offer an almost impenetrable barrier to their progress. The authors believe the slightly contagious nature of the disease to be referable to this fact.

Sponge-Grafting.—In a paper "On the Process of Healing," by D. J. Hamilton, M.B., published in the *Journal of Anatomy and Physiology*, volume xiii., 1879, the author advanced the view, substantiated experimentally and otherwise, that the blood-vessels of a granulating surface are not newly formed, but are simply the displaced superficial capillaries of the part. In making these investigations, his attention was arrested by the similarity of the process of vascularization as it is witnessed on granulating surfaces, and as it takes place during the organization of fibrinous exudation and blood-clot. Starting with the idea that blood-clot and fibrinous lymph play merely a mechanical or passive part in any situation where they become replaced by a fibrous cicatrix, that their vascularization is due to a displacement and pushing inward of the surrounding blood-vessels, and that, before organization, they are so much dead matter in the tissue, he resolved to experiment with some dead porous animal tissue in order to determine whether this might become vascularized and replaced by cicatricial tissue. Sponge properly cleaned, carbolized, and deprived of its siliceous and calcareous salts, was selected as best answering the required conditions. A series of experiments, executed both upon human subjects and animals, demonstrated the truth of Mr. Hamilton's assertions. In one instance sponge-grafting was performed on an ulcerated wound, probably specific, situated on the outside of the left leg, circular in shape, and measuring five inches in diameter, and from one-half to three-fourths of an inch in depth. Several pieces of sponge were introduced, and made to accurately fill up the wound; antiseptic dressings were employed, and antiseptic precautions observed in the treatment.

After six months, during which potassium iodide was administered, the sponge had entirely disappeared, and there remained merely a superficial, typically healthy suppurating surface, measuring one and one-half inch in diameter. In this experiment it was proved that, if a sponge be placed over a granulating surface, its vacuoles will in the course of time become filled with blood-vessels and cicatricial tissue, and ultimately the whole sponge will disappear in the wound, leaving an organizing mass of new tissue in its place. The vacuities of the sponge appear to be particularly adapted for allowing this, and the framework of keratode affords support to the young vessels formed within it. It was demonstrated furthermore, that even a putrescent condition of the wound will not prevent organization. Putrefaction destroys a blood-clot, but does not seem to affect the firmer texture of the sponge. After detailing his highly interesting experiments, and considering, in a masterly way, the process of organization as it occurs in blood-clot, fibrinous lymph, sponge, etc., the author offers some practical suggestions. The porosity of the body employed as the medium for the construction of new tissue must be such that all the canals freely communicate. Sponge answers this requirement, but the author thinks charcoal or calcined bone might be used in certain cases, especially where the prevention of cicatricial construction is aimed at, a solid framework must be employed. A dead body thus incorporated with the tissue is not of itself an irritant, but only becomes so by its injurious application, or the introduction with it of septic matter. A solid framework would be particularly useful in the formation of bone. Sponge or other framework must only be used for *filling a vacuity*, else it will cause inflammation, as when it is thrust between two portions of a muscle without a portion of the muscle being excised. Again, it should always be rendered antiseptic. The only objection against its adoption, which the author perceives, is the somewhat long time required to organize it, but he thinks that, after the sponge had become fixed, the patient might be allowed to go about, if practicable, and that this in certain cases might actually exert a beneficial influence upon the organizing power of the tissues.—*Edinburgh Med. Jour.*, November, 1881.

A Case of Excessively High Temperature.—At a meeting of the Clinical Society of London, on October 28, 1881, Dr. Stephen Mackenzie reported a case of excessively high temperature. The patient was a woman, aged forty-two, who, in 1878, had sustained an amputation of the left thigh, at its lower

third, for necrosis and intractable ulcer of the leg. On February 25, 1879, she was readmitted for painful affection of the stump. During her illness very elevated temperatures were observed, 111° F., in the axilla, being the highest. She was treated and discharged, cured in August. In October, 1879, she once more entered the hospital for pain in the stump. Operative procedures were again adopted, and on December 31, 1879, she came under the observation of Dr. Mackenzie. It was ascertained that she had taken opium for twelve years. On January 13, 1880, she had a slight rigor, and the temperature was found to be 109.2°. The pulse was 72 and the respiration 24. Then followed a series of elevated temperatures, and on January 22d, the highest recorded, 120.8° was reached. On April 5th, 113° was recorded. The patient was discharged on July 3d. On August 16th she was readmitted, and remained until September 24th. On August 19th, a temperature of 100° was recorded. Dr. Mackenzie expressed his belief that the temperatures were fictitious, upon the following grounds: 1. The patient was a neurotic woman, and "an educated hospital patient," *i.e.*, knew the importance attached to high temperatures. 2. That when, on one occasion, the temperature was taken simultaneously in the mouth, rectum, and axilla, the temperatures in the mouth and rectum corresponded, and were normal, whilst that in the axilla was six degrees higher. 3. That when two thermometers were simultaneously placed in the same axilla, there was as much as from one to four and one-half degrees difference. 4. That there was no correlation between the high temperatures, the pulse, and the respiration. 5. That on no occasion when the thermometer was held in the axilla, or the patient closely watched, was an excessively high temperature obtained. The patient denied absolutely having caused the high-temperature readings. The author stated that he did not wish to imply that all the recorded instances of high temperature were of the same kind. The fact that some cases recorded by good observers were genuine, rendered it desirable that a fictitious one should be exposed, to put the profession on its guard.

Dr. Teale was also inclined to doubt the reality of the majority of cases. As a rule, the patients are hyperæsthetic and neurotic. He had obtained the report of a case in which temperatures of 133 and 127.6 were said to have been reached.

Dr. Mahomed mentioned a case in which a patient utilized the respiratory movement to drive up the mercury.—*Medical Press and Circular*, November 12, 1881.

Treatment of Hydrocele and Serous Cysts in General by the Injection of Carbolic Acid.—Dr. Levis states that he has been experimenting, with a view of determining what substance may best secure the obliteration of the secreting surface and the adhesion of the walls of the cyst with the most certainty and the greatest freedom from suffering and danger. Having selected carbolic acid as an agent which would provoke simply a plastic inflammation, he injected one drachm of the deliquesced crystals into the sac of a large hydrocele. The new procedure was entirely painless. A sense of numbness alone was experienced, and no inconvenience was felt until, on the next day, the desired inflammatory process was developed. A nine years' hospital and private experience leads the author to believe that this method is the most satisfactory for the object. For the purpose of injection, crystallized carbolic acid is maintained in a liquefied state by a five or ten per cent. solution of either water or glycerine; the crystals are to be reduced to the fluid state with no more dilution than may be necessary for this. After the usual tapping, he injects the liquefied crystals with a syringe having a nozzle sufficiently slender and long enough to reach entirely through the canula. He has never been able to detect any general toxic effects upon the system, but believes that the action of strong carbolic acid on surfaces secreting albuminous fluids is to seal them, to shut them off from the system in such a manner that absorption cannot readily take place. The occluding influence of strong carbolic acid he regards as an important surgical resource in certain cases of compound fracture, destructively lacerated wounds, and ulcerating surfaces, where septic infection is inevitable. All forms of serous cysts which are usually subjected to any form of operative treatment, on the principle of producing plastic adhesion of their walls, may be deemed amenable to the treatment indicated.

Ergot in Lead-Palsy.—Dr. Stites, of Belmont, Nevada, in a communication to the *Therapeutic Gazette*, states that about fifty per cent. of a physician's practice in his locality consists of lead-poison cases. The greater part of the male population is at work in the silver mines, and liable to be affected by the lead contained in the silver ore. Wrist-drop is a very frequent symptom, and paralysis of other forms—even hemiplegia or paraplegia—is not an infrequent complication. The milder manifestations of these symptoms are usually removed in a few days by a cathartic of epsom salts, followed by iodide of potassium. Persons who abstain from alcohol, keep their bowels open, and lead regular lives, are much less liable to suffer from lead-poisoning. In hemiplegia and paraplegia due to lead-poisoning, Dr. Stites finds that the combination of ergot and iodide of potassium yields extremely satisfactory results. He prescribes the following:

℞. Potass. iodid. ..... ʒ ij.
Ext. ergot. ..... fl. ʒ j.
Ext. nuc. vomicæ ..... fl. ʒ j.
Tr. cardamom. co ..... ʒ j.
Syrup ..... q. s.
Aq. ..... ad. ʒ iv.

Sig.—A tablespoonful night and morning.

He prefers the above to the iodide alone, or electricity, or tonics and nux vomica. Power is usually restored in a month. Under other medication recovery does not take place under three months. The efficacy of ergot is attributed to its effect on non-striated muscular fibre. No danger attends the therapeutical application of the drug.—*Medical and Surgical Reporter*, November 19, 1881.

Ablation of Fibroid Tumors of the Uterus.—At the Académie de Médicine, M. Guéniot made some observations recently on the different methods employed in the ablation of uterine fibroids. He prefers excision by the constrictor or serre-nœud, on account of its simplicity and security. He considers it superior to Chassaignac's écraseur, as fundal polypi can be reached without previous traction on the organ. The operation is as bloodless as that performed by the écraseur, and the pedunele is cut cleanly across.—*Medical Press and Circular*, November 9, 1881.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, January 7, 1882.

THE STATE MEDICAL SOCIETY AND ITS NEW PROJECT OF CARING FOR THE INFANTS OF THE POOR.

At the meeting of the Medical Society of the State of New York, held on February 4, 1880, it was resolved: "That the president appoint a committee, consisting of five members, to co-operate with the New York Society for the Prevention of Cruelty to Children in all things pertaining to the physical and moral welfare and safety of infants and children, and report at the next annual meeting."

Such a committee was appointed, and we have its report now before us. From it we learn that on January 31, 1881, the president of the Society for the Prevention of Cruelty to Children addressed a letter to Dr. A. Jacobi, as vice-president of the State Medical Society, suggesting certain points for the consideration of this latter society.

The first topic suggested, as deserving inquiry, was that of wet-nurses. Mr. Gerry referred to the fact that many poor mothers hired themselves out in this capacity to the great physical harm of their own children. Wet-nurses are also, as Mr. Gerry believed, not unfrequently engaged who have a strumous or syphilitic constitution. It was suggested that there should be in each county a standing committee of medical men to examine and license women desirous of serving in such capacity.

The second point raised, was that of the employment of children in occupations injurious to their health. The sorting and rolling of tobacco leaves for the purpose of making cheap cigars, was especially referred to, and the opinion of the medical profession as to the injuriousness of this and other employments, was asked for. Mr. Gerry cites the recent French statutes forbidding the employment of children in a number of manufactures.

The industries thus vetoed are the manufacture of aniline, benzine, collodion, nitrate of methyl, sulphuret of arsenic, sulphuret of sodium, and of blister-leaves; in the textiles, of rag-sorting, and the scouring of skins and woollen waste with petroleum or other hydrocarburetted oils; in the metal trades, the galvanizing of iron. Children are also not allowed to be employed in places where chemical allumettes are stored, nor in those processes of their manufacture where the mixture is prepared or the matches put up into packets. A partial employment only, under certain conditions, is allowed in industries where sulphuric acid is engaged, such as in wool and silk bleaching, as well as in those where unwholesome dusts are given off, as in the preparation of tow for rope, and the manufacture and cleaning of bladders for toy balloons.

Finally, the necessity of compulsory medical care for children is sometimes very great. An instance is given of a child, in this city, who was suffering from a frightful ulcer of the leg, with necrosis of the bone. It was scarcely furnished the necessities of life by its parents, who absolutely refused to allow any medical treatment.

The report of the committee appointed by the State Medical Society is essentially a reply to and discussion of the points thus raised by President Gerry.

Regarding the first topic, Dr. Jacobi, speaking for the committee, states that the plan of licensing wet-nurses, or of procuring effective medical superintendence, would hardly be feasible. Instead of making any such attempt, the committee submit another plan, which is novel, and certainly deserves careful consideration. This plan consists in establishing places in New York where the children of the poor may be supplied with simple, though sufficient, articles of food.

Such articles, in the case of infants and young children, are powdered barley, powdered oatmeal, sugar, milk, and eggs. They should be supplied in about the following quantities: Powdered barley, a package of one-half pound to a child under one year of age every week; two such packages for a child of from one to two years of age. When oatmeal is required, it may be supplied in the same quantity as barley. Eggs, seven a week for a baby a year old or less; fourteen a week for a baby over a year old. Sugar, half a pound a week. Milk, twelve ounces for a baby under a year, twice daily; twenty ounces for a child over a year, twice daily.

During the four months from May 15th to September 15th, there should be added to the list of foods for sale, one ounce of brandy or whiskey per week.

"There is no food on which children, of whatever class, thrive so well," says the writer, "as on the few above enumerated. No patent foods are necessary, or are recommended."

The various details for carrying out the project thus suggested are fully discussed. We cannot go into them here. But it is to be hoped that a pro-

ject which seems so feasible and useful will, at least, be given a fair trial.

With regard to the second point raised by Mr. Gerry, the committee announces itself in full accord with his views. It will co-operate with the Society for the Prevention of Cruelty to Children in trying to secure laws protecting children from the dangers of improper employment.

The rights of children who are diseased to receive proper medical treatment, despite brutal and indifferent parents, are heartily acknowledged. The committee proposes, therefore, to the State Society the following resolution: "That a committee be appointed by you, who, in connection with the New York Society for the Prevention of Cruelty to Children, shall apply to the Legislature for an act providing for the helpless sick children whose health and life are endangered by those who ought to be their natural guardians, but who prove, by their acts, their enemies."

THE BILLS FOR MEDICAL SERVICES.

If from feelings of personal delicacy, or from other equally unreasonable considerations, the physician has deferred sending his bill for services rendered to his patients, the time has arrived when the accounts for the year must be settled in some way or other. He knows full well that the general sentiment of the people whom he has attended is adverse to the prompt settlement of medical bills, and that too generally the latter are paid eventually under protest. While, according to the general law of domestic economy, the physician must live as well as the butcher and baker, each debtor to the doctor would much prefer to change places with any others who were free from such obligations. Thus, the medical man is often impliedly placed in the position of one who is tolerated rather than encouraged, who is supposed to belong to the class of individuals whose pay, in great part, should be taken in the mere consciousness of doing good to his suffering fellows. These are priveleges denied to many, but in order to be properly appreciated by the physician he should be a trifle beyond want himself. These are our higher humanities, which can never attain their full function with an empty stomach. The smell of the lily may be a reasonable dessert after a hearty meal, but is not specially tempting to the man who is forced to descend to the prose of an ordinary bread-and-butter struggle.

Physicians, as a class, are too often tempted to look on the soft side of charity, and suffer in consequence. Hence the practical business man makes allowance for him, and is ever ready in a patronizingly considerate way to take advantage of him. Of course this is the fault of the doctor as well as his debtor. The readiness with which deductions are made from medical bills proves this. There is no doubting the fact that the prevalence of the practice has helped to create the too widely entertained impression that medical services have no positive value, and that they should be paid for only after a heavy discount has been allowed.

All these general considerations must have their bearing upon the medical men who are now making out their bills, and should help them to determine the amount of charges in given cases.

It is well to recollect, while due allowance should be made for those who can pay little or nothing, that the maximum charges should be reasonably high. Physicians, as a rule, do not place enough pecuniary value on their services. Generally they are considered by their patrons worth no more than the small sum usually asked for them. The rich, as a rule, are of this opinion, and are usually disappointed in their estimate of the real value of the services of a doctor if a comparatively small bill is presented.

High charges are generally the only means by which the value of services rendered can be proven to such as are able to pay for them. There is far less likelihood of charging these persons too little than too much. An opportunity for practically testing this point is doubtless presenting itself to many of our readers engaged in bill-rendering.

Another matter worth considering in connection with the squaring of accounts for the year, is how few patients shall be placed on the free list. Every physician has a greater or less number of patrons whom he is not in the habit of charging, who occupy toward him the anomalous position of being his friends so long as they can use him to their advantage, or who, possibly, in consideration of some slight service rendered by them, give them a claim upon his good will and good deeds. It goes without the saying that these patients are the most troublesome and least profitable of the entire clientele of the physician.

The best friends to the practitioner are those who pay him for what he does for them, and the sooner all services—no matter to whom rendered—can be placed on a cash basis, the better. It is quite easy to anticipate what may be the effect of cutting off worthless hangers-on by a formal bill. If they discharge their doctor in consequence of the insult of receiving his bill, they are the only ones that can possibly suffer by the change. At least the physician is relieved from the obligation of spending his time and his energies for naught.

Muscular Hernia Cured by Martin's Bandage.—Dr. C. E. Grovesteen, of this city, sends us the report of a case of muscular hernia on the upper and inside of the calf of the leg, of five months' duration, caused by a fall upon the toes, and cured by the use of a compress and Martin's bandage, and the external application of Churchill's tincture of iodine.

Reviews and Notices of Books.

Illustrations of Dissections in a Series of Original Colored Plates, Representing the Dissection of the Human Body. By George Viner Ellis, Professor of Anatomy, University College, London, and George H. Ford, Esq. Vol. I., January, 8vo. pp. 232. Second edition. New York: William Wood & Co. 1882.

This is the first volume of the series of twelve of Wood's Medical Library for the year 1882, and is a new departure in the scheme worthy of special notice. As its title indicates, it is a work of illustrated anatomy, with descriptive text. The plates, which are handsome chromo-lithographs in many colors, are reduced on a uniform scale from the life-sized drawings of the original English edition, and are reproduced in fac-simile with striking excellence and faithful detail. Each plate occupies a full page and represents the actual appearance of a dissected region of the body, showing all the organs in their relative positions, the anatomical characters being thus brought before the eye at one and the same time. In the present volume, which is one of two, there are twenty-eight plates, representing different regions of the head and neck, and of the upper extremities. These portions illustrate the various aspects of different parts of the same limb, and show the layers of organs and tissue in the natural order of succession in a manner that is thoroughly satisfactory and eminently praiseworthy. Not only are the appearances described with necessary detail, but the number and value of the remarks on the practical applications of the anatomical facts to surgical operations make the work of especial value for the study and consultation of such general practitioners as are called upon to perform surgical operations. Unlike the London edition, this one contains the plates, reduced in size, and bound with the text. This has a convenience of arrangement which, for purpose of easy consultation, more than offsets the apparent advantage of larger-sized drawings. The striking features of the work, however, are the number, beauty, and accuracy of its plates and the surprisingly low price at which it is published. If the other works of the series are equal in style of typography and value of contents, the library must increase in popularity with the practical workers in the profession, and become a duly recognized feature in medical publication. To the practitioner who cannot afford the expense of the larger atlases, these volumes must become not only a luxury but a necessity. The general style of binding is somewhat changed from the last series of the library, but is substantial and neat, and will make a tasteful appearance upon the book-shelf.

The Applied Anatomy of the Nervous System: Being a Study of this Portion of the Human Body, from a Standpoint of its General Interest and Practical Utility. Designed for use as a Text-book and a Work of Reference. By Ambrose L. Ranney, A.M., M.D., with numerous illustrations. New York: D. Appleton & Co. 1881.

The general practitioner now-a-days will confess very readily to an ignorance of any special knowledge of the nervous system. A vast deal has been contributed to its anatomy, physiology, and pathology within a few years; so much, indeed, that it is rather discouraging. To sit down and battle with Quain and Stricker, with Foster and Hermann, and the host of untranslated French and German writers, requires no ordinary courage.

Dr. Ranney has done a most useful and praiseworthy task in that he will have saved many of the profession from the choice of going through the work we have indicated, or remaining in ignorance of many things most essential to a sound medical knowledge.

The book before us is a digest of the principal facts in the anatomy and physiology of the nervous system. It contains also as much of pathology and of clinical symptoms as are suggested by the physiological points given. There is, indeed, as much physiology, practically applied, as there is of anatomy.

Every one who treats of so broad a field as the nervous system, must draw very largely on the work of others. Dr. Ranney has done this more conspicuously than is usually the case. Nevertheless, the facts are industriously collated, the important points are clearly and systematically set forth, and the author has shown a genuine talent in his mode of presenting and analyzing difficult subjects.

The book does not attempt to go into the minuter anatomical or physiological details; it shows some evidences of progressive cramming; there are quite a number of minor errors, and there is in some parts a lack of the usual good judgment in presenting coherently the different points.

These are all defects, however, which can be easily remedied in subsequent editions, and do not seriously impair the value of the work.

The book is divided into four parts, which treat respectively of the brain, the cranial nerves, the spinal cord, and the spinal nerves.

An analysis of the chapters on the spinal cord, which are among the best in the book, will give an idea of the author's treatment of this subject. There is first given a description of the cord, its anatomy, functions, and clinical bearings. Then follow descriptions of the cervical and lumbar enlargements, of the fissures and columns, the roots of the nerves, the membranes, the cerebro-spinal fluid, the appearance of transverse section of the cord, with its pathological and physiological subdivisions.

The functions of the spinal cord are then discussed in detail. A chapter on the clinical points relating to the cord follows, and then a full description of the systematic and non-systematic lesions, according to classification of Seguin.

The book is most profusely illustrated with cuts from various anatomical and physiological works. We can only repeat that its author has rendered a great service by making so many facts clear and accessible to the profession.

Another Educational Advance has been made by the Medical Department of the University of Pennsylvania. We are informed by the *Medical Times* that a course preparatory to medicine has been created. It gives the student an opportunity to study zoölogy, botany, biology, chemistry, physics, and the languages. The course lasts one or two years and leads to no degree. While not so desirable as a regular scientific or classical course, one can easily see that it will supply a want felt by many young men.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 15, 1881.

DR. R. F. WEIR, VICE-PRESIDENT, IN THE CHAIR.

TRANSIENT ALBUMINURIA AS IT OCCURS, PARTICULARLY IN CHILDREN AND ADOLESCENTS, IN APPARENT HEALTH.

DR. FRANK P. KINNICUTT read a paper on the above subject, in which he first alluded to the practical importance of the occurrence of transient albuminuria, to which especial attention had been directed during the past few years by Sir William Gull, George Johnson, Saundby, Moxon, and others, and then gave a résumé of the various theories which, from time to time, have been offered in explanation of this phenomenon.

That which the author of the paper suggested as the most probable was the following: The transient albuminuria in persons apparently healthy is due to slowing of the blood-current in the glomerular vessels, dependent upon temporary vaso-motor disturbances, with alteration, also temporary, in the glomerular epithelium. He farther believed that the real source of irritation was to be found in the temporary presence of imperfectly oxygenized matters in the renal circulation—in other words, transient oxaluria and lithuria.

Dr. Kinnicutt then reviewed the cases of transient albuminuria which have been reported by various observers. In 1873, Sir William Gull said that, in his experience, it occurred in young, growing men and boys almost as frequently as spermatorrhœa. In 1878, Moxon, in "Guy's Hospital Reports," reported nineteen cases. Dr. Clement Dukes, in the *British Medical Journal*, November, 1878, reported several cases, which, in many respects, differed from those given by Dr. Moxon; and in the same journal for November 10, 1881, Dukes had reversed his opinion, and stated that he regarded albuminuria as evidence of true Bright's disease. Dr. George Johnson also, in the *British Medical Journal*, had directed attention to the question of temporary albuminuria, and had expressed the opinion that the smallest trace was always pathological and never physiological. Reference was also made to cases reported by Saundby, of Manchester, and others.

Dr. Kinnicutt then gave a brief sketch of each of his own cases. The first three patients were young men, aged twenty-three, twenty-one, and seventeen respectively. In each case there was a large amount of albumen found in the urine, together with oxalate of lime and uric acid crystals. The chief subjective symptoms were: sense of weariness, lassitude, inaptitude for either mental or physical labor, headache slightly in the morning, impairment of appetite, etc. Exercise in the open air and mineral waters were prescribed, together with regulation of diet, occupation, and habits, and both the subjective and the urinary symptoms disappeared permanently. The histories of several other cases were given, occurring in patients whose ages varied from five to twenty-two.

His own observations seemed to show that temporary albuminuria, as it occurs in children and adolescents in apparent health, may be traced, in a large number of instances, to a transient oxaluria or lithuria, and he suggested that the sequence of events in the causation of the albuminuria is as follows:

First.—The temporary presence of a large amount of imperfectly oxygenated matter in the circulation.

Second.—Disturbances of the general nervous system, in which the vaso-motor system of the kidney shares, or one confined to the vaso-motor system of the kidney in its elimination of these products of a faulty digestion.

Third.—A transient dilatation of blood-vessels in the kidney, and a retardation of the blood-current in the glomerular vessels, with possibly consequent alteration in the functions of the glomerular epithelium, also of a temporary nature.

The paper being before the academy for discussion, DR. WILLIAM H. DRAPER spoke as follows: It seems to me, Mr. President, that Dr. Kinnicutt's interesting paper presents two or three points which are especially worthy of consideration. The first of these is the question as to the essential cause of albuminuria. Dr. Kinnicutt has considered this question very fully, and we find that there are various opinions held as to the essential cause of the transudation of blood-serum into the urine. I think that it must be evident to any one who has had much clinical experience, that the theory of blood-pressure is not sufficient to explain the presence of albumen in the urine, for it is certain that we find in health very great variations in blood-pressure, which are not followed by the presence of albumen in the urine. The variation in the quantity of urine in health is considerable, and such variation must coincide with the variations in blood-pressure in the kidney. Again, if transudation were dependent solely upon blood-pressure, I think we should find, in those diseases in which blood-pressure is seriously altered, the presence of albumen in the urine much more constant than it is. We know, for example, that in a contracted kidney, in which we commonly have hypertrophy of the heart, and in which there is great arterial tension, the presence of albumen in the urine is by no means constant. When albumen does present itself, we also know that it is transient, and in small quantities. Then, if we take diseases of the heart in which there is obstruction to the return circulation, where the blood-pressure is sometimes very much reduced, and possibly there is congestion of viscera, I am quite certain, from a considerable experience, that the presence of albumen in the urine, under these circumstances, is a very variable phenomenon. You will find, sometimes, that there is considerable congestion of the lungs and a well-marked systemic congestion, and, at the same time, there is no albumen in the urine. It seems to me that hyperæmia alone, whether active or passive, fluxionary or dependent upon venous obstruction, is not a sufficient explanation of the presence of albumen in the urine. I believe that we must invoke some other condition to explain this phenomena. Dr. Kinnicutt, in his paper, alludes to the opinion expressed by German observers, and pretty generally accepted, that albuminous transudation does not take place in the kidney unless there is destruction or deterioration of glandular epithelium. We know very well, that in the chronic Bright's diseases, especially in the parenchymatous varieties, in which the presence of albumen is most constant and most pronounced, the glandular epithelium is degenerated, and, to a very considerable extent, in the later stages of the disease, destroyed. These diseases, therefore, would seem to furnish

proof that this condition is one favorable for the transudation of blood-serum. There is another condition, however, and it is one Dr. Kinnicutt has dwelt upon, which by itself, or, perhaps, by inducing the changes in the glandular epithelium, may give rise to the presence of albumen in the urine. There can be no doubt as to the association of urates and crystals of uric acid and oxalate of lime in the cases of transient albuminuria occurring in adolescents and children, and it seems to me, that if we consider some of the morbid conditions in which albumen is found in the urine, we shall find them corroborative of this suggestion, that the presence of imperfectly oxidized material in the blood may give rise to albuminuria. It is a common observation that the urine of persons suffering from fever may contain albumen. I think it is the rule in pneumonia to find a certain quantity of albumen in the urine; certainly in typhus fever it is present almost invariably; also, it may exist in typhoid, and, in fact, whenever we have high temperature and rapid emaciation, and the blood is necessarily loaded with the debris, so to speak, which results from rapid metamorphosis of tissue. Here, then, we have not only the condition which has been spoken of as essential to the presence of albumen—hyperæmia of the kidney—but we have hyperæmia combined with the presence in the blood of considerable irritative matter.

As to the vaso-motor theory, which is the most popular just at the present time, whether it is sufficient to explain the presence of albuminuria in children and in adolescents, I do not know. There is one question which certainly will suggest itself in considering this theory, and it is this: Why, if the imperfectly oxygenized nitrogenous matters produce this temporary albuminuria, by giving rise to vaso-motor paralysis in the kidney, should it occur so seldom, considering the great frequency of such changes in the urine? I suppose all of us have, more or less, lithæmia, and pass urine which contains lithates in abnormal quantity, and yet, I am sure, the occurrence of albuminuria under these circumstances is, to say the least, in adults, and also in adolescents and young children, not a common event. Why is it that in a few cases these changes produce vaso-motor paralysis, while in a great majority of cases such a condition is not produced? You may say that it depends upon a certain vulnerability of the kidney in different persons. This also is a convenient theory. It is true that the skin is vulnerable in some people, and the mucous membranes or kidneys in others, and it is possible that this is a reasonable explanation, but still it does not seem to me altogether satisfactory.

There is one other point to which I will direct attention, and that is the general significance of albuminuria. We have seen, from the cases presented by Dr. Kinnicutt, that albumen in large quantities has appeared in the urine of young children and adolescents, and it has seemingly been a very innocent circumstance. It may be so. I have no doubt that in his cases it was so, but, at the same time, I think it always suggests suspicion of possible kidney disease. I do not believe that it is safe, under any circumstances where it has occurred not to look upon it with a certain amount of suspicion and interest, but I believe that if we regard this symptom as we should, as only a single one, and if we study it as we should in connection with other evidence of disease, we shall not often go astray in our appreciation of its true significance. We all know that a heart-murmur is not necessarily an indication of organic valvular disease, and in making this statement I do not allude simply to the ordinary blood-murmurs, but to murmurs which are not to be explained in this manner. By this I mean to say that we do not always consider them sufficient evidence of the existence of organic valvular disease. We should always consider the murmur in connection with other symptoms. So, I think, albuminuria should never be considered by itself, and a false significance attached to it possibly by considering it alone. This leads me to remark, that the only safe, sure, and certain way of appreciating the proper significance of the presence of albumen in the urine, is to consider it in connection with an estimation of the functional power of the kidney. We may have transient albuminuria not significant of structural disease, or, at least, only temporary change, or we may have transient albuminuria significant of organic disease, the latter being the rule in the history of the contracted kidney; and, in order to estimate the true value of the albuminuria in both instances, we must estimate the functional power of the kidney. This we can do by estimating the daily quantity of urine and its solids, and in this way avoid error in our appreciation of the significance of the presence of albumen in the urine.

Dr. A. Jacobi: I had the opportunity, Mr. President, to hear only a part of Dr. Kinnicutt's paper, but, from what I did hear, and from the general remarks made by Dr. Draper, I have been led to understand that albumen can show itself temporarily in the urine of children and adolescents in apparent health. I should say, from a general point of view, that when albumen appears in the urine, it is due either to a fault of the blood, or to a fault of the muscular apparatus propelling the blood, or to a faulty condition of the blood-vessels, or to a condition of the kidneys. With regard to the blood, I do not believe that it has anything to do with it, as we know that its condition has nothing to do with hemorrhages, which are always due to changes in the blood-vessels or of the heart, or, perhaps, are due to innervation. I shall add nothing to what I have heard already, except one point, which has, I think, not been alluded to in the etiology of temporary albuminuria, and that is the condition of the blood-vessels in certain cases. I have seen two patients in whom I found well-marked albuminuria associated with disease of the blood-vessels. In one instance of hæmoglobinuria occurring in an adult man, who had always been well, but had been exposed for one or two days to cold and wet, it was suddenly noticed that the urine was dark-colored, and it soon became absolutely black. This condition of things passed away in about a week. Some weeks afterward the same thing occurred again, and the patient lost a considerable quantity of blood. The same condition of his urine appeared a number of times at varying intervals. Nothing was necessary to bring the hæmaturia on, except exposure to cold air or rain. I found a number of times when he was apparently well, that his urine showed the presence of albumen, and, at the same time, there was no blood or pus in it. In this case I regarded the presence of albumen in the urine as certainly due to the diseased condition of the blood-vessels, and primarily so. Cases of this kind have to be explained by the faulty condition of the blood-vessels, in the same way as do certain cases of purpura, or morbus maculosus. A girl, seven or eight years of age, came under my observation, who had been the

subject of purpura a number of years. It was not known that she had been a bleeder from birth, nor was there any history of hæmophilia in the family. Purpura first developed at three or four years of age, and with her was quite a common occurrence. She had as many as two or three attacks in the course of a year. Sometimes the quantity of blood lost would be very slight, at other times larger; sometimes the attack would last a week, at other times three or four days, and be attended with the appearance of albumen, without blood or pus, in the urine. It was usually not long after an attack of purpura before she was fully recovered, and when well there was no blood or albumen to be found in the urine. I judge, from two such cases, that one of the causes of temporary albuminuria is a defective condition of the blood-vessels, which favors the occurrence of hemorrhage; and where there is no hemorrhage, a condition remains sufficient to allow the serum to ooze through the walls of the vessels. This temporary albuminuria should not be overlooked, and I think that in a few cases it will be found complicated with a tendency to morbus maculosus. With reference to the literature of the subject, I would direct attention to a most valuable article, written by Dr. Ellis, of Harvard College, and published in the *Boston Medical and Surgical Journal*, which contains complete references to everything that has been written upon this subject, up to the date of its publication.

Dr. William H. Thomson: I am not aware, Mr. President, of having made any observations which will quite illustrate the particular class of cases referred to in Dr. Kinnicutt's interesting paper, but I may say that I have had a number of cases of transient albuminuria occurring among children, several of whom I watched carefully, and in which I ascribed the condition exclusively to malarial attacks. I was led to this conclusion first, by observing a case of intermittent hæmaturia occurring in a child three years of age. There was no evidence of purpura, and the hæmaturia lasted two or three weeks, and then distinct symptoms of intermittent fever developed. The intermittent hæmaturia disappeared entirely, but for two years afterward albuminuria made its appearance now and then, and promptly yielded to the administration of quinine. This case led me to examine the urine in others where I suspected malarial infection, and I could produce the notes of at least twelve cases, occurring among children, where there was no hæmaturia, and yet where there was albuminuria, and I have regarded it as temporary, due to a transient renal congestion produced by a malarial affection. My attention at that time had not been especially directed to one of the causes which Dr. Kinnicutt has mentioned, and it may be said that the albuminuria and the hæmaturia in these cases were the result of considerable lithuria, as we all know that that condition is exceedingly common in children from three to ten years of age; but if transient albuminuria is a frequent accompaniment of lithuria, I should regard it as due to a temporary tubal catarrh, produced by local irritation from crystals of oxalate of lime and uric acid, which are of themselves necessarily irritant, rather than to bring in the hypothetical view that it depends upon some affection of the vaso-motor system of nerves. I was very much interested in the paper, and at the same time it has served to deepen an impression which has been growing in my mind for a number of years, which is, that we do not know what the causes of albuminuria are, in the sense of being able to reduce them to one or two principles; that we are constantly brought in contact with cases in which albuminuria occurs without any of the causes which are ordinarily supposed to operate in its production, and also we are as constantly brought face to face with exceedingly serious and fatal disorders of the kidney, in which albuminuria has never been a prominent feature of the disease. I say never advisedly. I will mention in illustration two such cases of an opposite kind. In one of them there was transient albuminuria, which afterward became permanent. It occurred in the practice of Dr. Mourraille, by whom I was called to see the patient, in consultation with Professor Flint. A gentleman, about sixty years of age, awakened one night in the summer, suffering from a severe attack of dyspnœa. The attending physician examined the patient's urine, and found it highly albuminous. The doctor then stated that he had attended this gentleman for some weeks, during which time there was albumen in the urine, but that it gradually decreased in quantity, and then entirely disappeared. On one occasion the urine was examined and no albumen was found, and within half an hour the patient had a severe attack of dyspnœa. It was then again examined, and was found to be exceedingly albuminous. Dr. Flint and myself both agreed that the dyspnœa was uræmic in character, and each of us thought it most likely that the patient had had renal disease for some time without being aware of it, and that this was a transient exacerbation, which finally disappeared and then recurred. But I was struck with the fact that there was no tension of the pulse, no change in the condition of the arteries, but that they were much softer than they commonly are in persons of that age. I watched the case very carefully, and the albumen disappeared in the course of eight days. The urine had been examined carefully and repeatedly, and I had made several examinations of it myself, and yet, within ten hours from the last which I had made, I was called to see the patient in an attack of severe dyspnœa, which was followed by free pleuritic effusion on the right side. Here we had all the symptoms of uræmic dyspnœa and albuminuria developed, at one time, within a half-hour, and then intermittent attacks of dyspnœa occurred, and finally a severe attack, with effusion into the pleuritic cavity, and albuminuria within *ten* hours of the last examination of the urine. Finally the albuminuria became permanent, with abundant epithelial and fatty casts, and in the course of eighteen months the patient died, with all the symptoms of chronic Bright's disease.

On the other hand, occurs a case within the present year. A young married lady, always perfectly healthy, became pregnant. The pregnancy progressed without any of the ordinary symptoms. At the end of the sixth month I began to examine the urine, and found no changes in it, either chemically or microscopically, up to the close of the seventh month and the beginning of the eighth, when I discovered that the specific gravity was falling, while the urine was abundant in quantity. The specific gravity fell from the normal, until it reached 1,010-8-6-4, and yet there was not the slightest trace of albumen. The only other peculiar physical appearance which it presented was the absence of color. The simple fact of the diminished specific gravity, made me very apprehensive of an unfavorable termination of the case, and I felt that I should, perhaps, bring on premature labor. The only symptoms from which the patient suffered were slight head-

aches in the morning, and occasionally some nervousness, but not at all marked. I was called one morning, suddenly, to see this patient in a convulsion, which killed her at once. Not a trace of albumen was found in the urine from the beginning to the end of the case, although daily examinations were made for a month. There were no casts. The only changes in the urine were the lowered specific gravity and the absence of color, and yet the condition was one in which we would very naturally expect albumen in the urine to be present, due to pressure upon the return circulation incident to pregnancy. I mean, therefore, this: a case like the first, that in which a man suffered from attacks of extreme dyspnœa, with transient albuminuria, the attacks of dyspnœa recurring, and the transient albuminuria finally becoming permanent and associated with disorganization of the kidney; and a case like the second, in which a condition occurs which, in accordance with the mechanical theory, is supposed to be dependent upon pressure, and yet there is no albuminuria whatever, only sustains me in the belief that we have not yet reached the ultimate cause of albumen in the urine. In both of these cases we have theories contradicted by clinical experience, and hence I do not see that we have yet a single explanation of albuminuria which is satisfactory in anything more than a certain proportion of cases. On that account none of our hypotheses rise higher than mere hypotheses, else we should not have these extraordinary exceptions to them. I do not see how we can appeal to vaso-motor paralysis, either transient or permanent, to explain the presence of albumen in the urine, for we have many cases of vaso-motor paralysis in which there is no albumen in the urine. So, again, with regard to increased blood-pressure: when it is presented to us in its typical form, in the high tension of the pulse in the granular kidney, it is usually not accompanied with albuminuria, but the reverse.

Dr. E. C. Seguin, in support of the theory advanced by Dr. Kinnicutt, that uric acid and oxalate of lime and urates produce irritation of the kidney, and in a reflex way cause vaso-motor paralysis of the associated vascular system of the organ, referred to a classical experiment performed by Ranvier, twelve years ago. It consisted in tying the vena cava ascendens of a dog, following which there was no œdema observed in the lower extremities. He then cut the sciatic nerve on one side, and there ensued an œdema of the paralyzed member, the other limb remaining normal. This experiment would go to show that a vaso-motor paralysis was necessary to transudation of the liquid elements of the blood into the tissues. The same result has also been obtained in attempting to produce Basedow's disease experimentally. It was found that neither ligation of the internal jugular veins, nor yet section of the sympathetic nerve, when done separately, produced it; but it was left for a pupil of Donders, Boddaert in 1872, to show that by a combination of the two operations a very remarkable resemblance of the disease is produced, including projection of the eyeball. If now we take into consideration, on the one hand, the clinical points in connection with the contracted kidney, as well brought out by Dr. Draper, the high arterial tension, which is characteristic and yet no transudation of the albumen; and, on the other hand, the fact that where blood-tension is lowered from renal or general disease, and albuminuria exists, these two sets of facts, with the experiments above referred to, rally considerably in support of Dr. Kinnicutt's explanation, and do not interfere with that given by Dr. Jacobi. It may be that the lesion of the blood-vessels, to which he refers as the cause of the transudation, is relaxation and separation of their muscular cells through vaso-motor paralysis.

Dr. E. Bradley referred to cases of temporary albuminuria occurring in young persons addicted to the excessive use of cigarettes.

Dr. Jacobi: I did not mean to say that my explanation was for every case. It was simply put forward as one of the causes of albuminuria.

Dr. Kinnicutt, in closing the discussion, said he had endeavored to show in his paper that albuminuria could not be explained on the ground either of high or low arterial tension alone. He had also endeavored to show that filtration of albumen through an animal membrane is a comparatively slow process; that a condition of such filtration is, that the albumen remains a comparatively long time in contact with the wall of the vessel, and such prolonged contact can be obtained only by retardation of the blood-current. He had suggested that such retardation was brought about by disturbance of the vaso-motor system within the kidney. He also stated that he did not claim that his explanation was sufficient for all cases of albuminuria occurring in children and adolescents; he believed that its more frequent occurrence then than at a later period of life was due to the greater mobility of the nervous system which obtained at these periods. The explanation asked by Drs. Draper and Thomson, of the occurrence of a temporary albuminuria in only a small proportion of cases of lithæmia in children and adolescents, he thought might be found in the supposition of an *individual* mobility of the nervous system in such cases. In this connection, he would ask them the explanation of the comparative infrequence of general nervous symptoms in cases of lithæmia—symptoms which were well recognized as occurring in a certain number of such cases. Again, why it was that one individual developed an eczema or an urticaria, and another an affection of the mucous membranes under such circumstances?

The absence of structural change in the glandular epithelium, it seemed to him, was demonstrated by the very transient nature of the albuminuria in the cases which he had observed and reported. He had suggested, as one of the factors in its production, a *temporary disturbed nutrition* of the epithelium, dependent upon altered nutrition, also of a temporary nature. If Nussbaum's conclusions were accepted, and they had been reached by a careful series of experiments, that the glomerular vessels were the seat of the transudation of albumen, then the suggestion offered by Dr. Thomson, that in these cases there is transient tubal catarrh, would not apply. Dr. Thomson had also spoken of the absence of albuminuria in the case of ophthalmic goitre. A number of cases, however, had been observed, in which the albuminuria had only appeared with the development of this affection, disappearing with its cessation. To determine whether albuminuria was present or not in a case of exophthalmic goitre, it was necessary to examine the urine not only every day, but at different times in the same day, as in the cases reported. The fact had been brought out very prominently that a great variation in its occurrence was the rule. Cases of this kind had been reported by Dr. Begbie, and corroborated by Dr. George Johnson.

Dr. Kinnicutt thought that Dr. Jacobi's suggestion might be accepted in explanation of certain cases of a transient albuminuria, although in his own the disease mentioned could be excluded.

With regard to the existence of malaria as the cause of albuminuria, he believed that it could also be excluded from his cases, inasmuch as they had been under constant observation, and during the entire period there had been none of the ordinary manifestations of malarial poisoning.

The academy then adjourned.

Correspondence.

LETTER FROM WASHINGTON—A DAY WITH GUITEAU.

To the Editor of The Medical Record.

Sir: We arrived early Thursday morning, and drove at once to the Tremont House, where Mr. Scoville boards. Our cards were sent up. While I was waiting in the office, a small, neatly dressed man came up to me and said his name was Guiteau, and that Mr. Scoville would be down soon. Having associated the name of Guiteau with everything grim and demoniacal, it was something of a shock to find so inoffensive-appearing an individual presenting it. The gentleman was Mr. J. W. Guiteau. He appears like a polite and "every-day young man"—nothing more. Mr. Scoville soon came in. He is gray and bald, but vigorous in manner, and shows no signs of age. His face is somewhat pale and his eyes red, as though from over-use. He talked to us very freely about the trial. He was very sanguine, and expects to convince some of the jury at least that Guiteau is insane. He referred to the unfavorable comments made upon his hypothetical question. He said, however, that he put in it only what he expected, and was really obliged to prove before the jury. He thought he could convince the jury of the truth of most of his assumptions. Speaking of his not cross-questioning the first experts for the defence—*i.e.*, Drs. Godding, Nichols, Folsom, and others—he said that he expected to be able to prove by cross-examining the experts for the defence all the points necessary. Mr. Scoville, at the early part of the trial, thought that almost all the experts would come over to his side. He was too optimistic, however. He discussed the conduct of the Government experts very freely, though not unkindly. They had met, and had finally all agreed to go over to the prosecution, and stand by each other, as it was, in a measure, their interest to do, being all asylum superintendents. It was a kind of "psychological contagion of non-expertness," as Dr. Beard had called it. This is hardly a fair way to put it, I think, as some had undoubtedly made up their minds independently before or after arrival at Washington.

Mr. Scoville referred to Dr. Hamilton's testimony as being unnecessarily positive in character. He showed us the measurements of Guiteau's cranium, made by that witness. They were taken in the usual way, but it so happened that the configurations of the median line, of the auriculo-bregmatic line, and of the circumference just above the external angular process, do not show the irregularities as they really exist, but only a slight bulging on the right side. I enclose them here for your use if you wish. The fact is that there is a decided bulging near the left parietal eminence (the posterior vertical line described by Topinard would pass through it), and a depression almost corresponding on the right side. I examined the cast of the head carefully. It does not show the irregularities so well as the head itself, but one can see an obliquely directed ridge of bone passing from about the left parietal eminence backward, downward, and toward the right till it reaches the vicinity of the right ear. This ridge is two or three inches wide. Most of it is on the left side, and it makes the skull noticeably asymmetrical. I took a strip of lead and adapted it to a line on the skull, passing from the left ear over the occiput to the right ear. In this way I got a trustworthy tracing proving in quite a striking manner the degree of asymmetry of the skull. I also saw a tracing made by the hatter. But this configuration is too low down to indicate anything. A tracing made at about the same height by Dr. Hamilton shows only a slight bulging on the right side. Another circumferential measurement made parallel to the alveolo-condyloid plane, about one inch lower than the bregma, just above the frontal prominences, shows better than any other the apparent fact that there is less brain on the right than the left side. This, combined with the deficient innervation of the left side of the face, and the turning of the tongue to the left, may or may not indicate something. Most likely the facts are of no importance at all.

We went up to the Court House, and I obtained a seat close by the dock, so near that I could touch the prisoner as he sat there. I was not rid of the idea that something massively brutal and fiendish was to be expected in the appearance of President Garfield's assassin. There was consequently a mixture of surprise and disappointment on first seeing the prisoner. He is a puny, white-faced, insignificant little fellow, with a peculiar look in his eyes, and a rather anxious expression on his face. He sat down in the dock, but at once began an appeal to the judge to have his usual guard of policemen. I watched him narrowly for the two hours ensuing. He seemed to be in a state of nervous tension all the time, with his mind keenly awake to every incident of the trial. He did not seem to be feigning anything, but he did appear annoyed and anxious at times. He read the newspapers; there is no doubt of that, for I could see his eyes move from time to time. It is a mistake to suppose that his interruptions are all well-timed and useful to himself. He exults when a point is made for him, and loses no chance of getting a hit at Corkhill or Porter; but he abused his counsel roundly for putting in a letter applying to Cameron for $500—a letter which, if sincerely written, is a most extraordinary document. There is nothing like a circus display in the court-room, as has been intimated, but there is not unfrequently slight laughter at the remarks of the prisoner. It is difficult to conceive the intensity and bitterness of feeling against Guiteau shown by the prosecuting attorneys. Corkhill seems to be in a state of constant irritation toward him; Judge Porter never interposes a remark without attempting some dramatic effect for the benefit of the jury. Mr. Davidge and Judge Cox are more fair. On the other side, Mr. Scoville battles away, doing his best, and doing very well. He refuses to be imposed upon, and is showing a better appreciation of the points that he must make as the trial proceeds. He is profoundly convinced of the insanity of Guiteau, and appears to be only amused at the abuse heaped upon him. Mr. Reed is a sharp lawyer, but not an extraordinary or particularly brilliant one. I doubt

if he has a very great knowledge of insanity in any of its relations.

It is apparent, on the whole, that the prosecution is working its very utmost—not to discover the real mental condition of Guiteau, but to have him hung as soon as possible. On the other hand, the defence tries simply to convince the jury that Guiteau was insane on the 2d of July, and did not at that time know the difference between right and wrong. Of course, to one looking at the matter from a scientific point of view, the whole trial is a ridiculous farce. Bitterness and passion are at the bottom, and reason is used only in so far as it helps on the desires of the heart. The minds of the Washingtonians are drenched with this same hate of Guiteau. I met no one, male or female, who was able to discuss the question of Guiteau's sanity without interjecting a wish that he should be hung. It is possible that the experts felt somewhat the influence of this feeling. In those whom I heard examined there is no question that they strained a little in order to increase the effect of their testimony. Thus, one gentleman, Dr. Kempster, testified in a way which would lead the listener to think that heredity was a very insignificant element in the causation of insanity. An impression was given also that delusions of "inspiration" came always through suggestions from without, and were rapid and instantaneous in their development and action. A few of the experts testified to a belief in Guiteau's feigning. I can understand how such a suspicion would arise, but I could not convince myself that it was a fact. Guiteau is certainly sane enough now not to want to be hung, and he tries in an anxious and blundering way to help his cause. It is plain, I think, that his case would be better, on the whole, if he had kept still. I would not wish to intimate that the experts for the defence are not perfectly sincere in the views they testify to. But it seems to me that it would be almost impossible to live in Washington for five weeks and not catch some of the sanguinary spirit afloat there.

The real issue of course is: Is Guiteau insane? The methods used in the trial to obtain a settlement of that question are to the last degree farcical. The experts are used by the lawyers simply to serve their ends; and opinions or views that would not be likely to affect the jury are treated with indifference.

After the close of the afternoon session we took a carriage and drove over to the jail, where we were conducted to Guiteau's cell. This is the last of a long row of cells, and the largest and best of them. Guiteau was seated at a table, engaged in his never-ending writing. He rose to receive us, and said he was rather busy, but would be willing to talk to us. He has been rather over-interviewed, and does not enjoy it as he once did. However, he treated us courteously, offered us seats, and answered our questions, for the most part, in a mild and pleasant tone of voice. My companion asked him if he was a Christian. "Yes," he said, "I hope so—indeed, I know so—of course." We questioned him about his inspiration. He thought it was like that of the apostles. He thought his book "Truth" was inspired, just as the Bible was. He told us about the hard work he had put upon it. The book is out of print now. I asked him if he thought, supposing he were let out, that he would be liable to have an inspiration again like that which caused the assassination. "No," said he, "of course not; I don't wish to talk about that." He got a little surly, and again a little excited, when talking about public opinion, which, he was convinced, was turning in his favor. He dwelt upon this a great deal. I asked him what his feelings were after he removed the President. He said that after he had been safely placed in jail he never felt happier in his life. He was pleased and satisfied with the progress of the trial, and did not allow it to worry him after he got back to jail. I imagine that it did worry him a little, however. He said he did not sleep very well; he slept for about four hours, then awoke and dozed irregularly until morning. Guiteau's face is pale; his eyes have a peculiar look, to which I have referred, and which is due, in part, to the white and almost œdematous lids, reddened margins, and suffused conjunctiva.

The tongue, when protruded, turns very noticeably to the left—not only the tip, but the whole organ. The experts have stated that this is not rare or unusual. It so happens that in my experience I have never seen a tongue so deviated in a healthy person; hence I was struck by it. There is a vertical furrow on the right side of the forehead, but none on the left. Of the two furrows on each side of the mouth, that on the left is deeper. The left eye, that is, its palpebral fissure, seems smaller. By watching very closely one can notice a slightly less active movement of the muscles of the left side of the face. This is very slight indeed. In smiling the lips appeared to be drawn out symmetrically. On the whole, the evidences of physical defect in Guiteau are slight.

Guiteau's appearance was mild and inoffensive. I could hardly realize that I was standing in the presence of a person who had done an act which aroused a great nation, altered so many destinies, and turned the eyes of the whole world upon him; a man who, if sane, is a greater monster than ever was conceived by the weirdest imagination of Sue or Dumas.

I went to Washington thinking that society ought to consider Guiteau a sane man. It is difficult not to feel now that the theory that he is insane best harmonizes and makes clear his actions. If I were an expert (which I am not) and obliged to testify, I would say that I did not know—a position at once safe, scientific, and impregnable.

Yours, etc., C. L. D.

NEW YORK, December 31, 1881.

OVARIOTOMY DURING PREGNANCY.—E. P. Bennett, M.D., reports the following:

"In the summer of 1880 I was called to see a young married lady whose abdomen had been enlarging for over a year, and who was pronounced pregnant, and so sure was this physician, that he declared he could hear the tic-tac of the fetal heart for at least a month before my visit. On examination I readily diagnosed ovarian cyst, but as she had not menstruated for three months I admitted that she might be pregnant, but not so far advanced as to hear the fetal heart. I operated, removing a large cyst weighing about fifty pounds. She progressed favorably for ten days, when she aborted with a very small fœtus. The abortion produced no unfavorable results, and she rapidly recovered without a single unfavorable symptom. In my own mind I am satisfied that no such favorable result would have been obtained by tapping and leaving pregnancy to take its natural course, as every tapping would have reduced her general strength, and this with the drain made upon her by nourishing the fœtus would have been too much for her."

A WORD FOR TRUTH.

To the Editor of The Medical Record.

Sir: Dr. William A. Hammond, in a letter, headed "A Word for Dr. Beard," which appeared in your issue of October 15th, sees fit to apply some rather strong language to the observations which I thought it my duty to make on Dr. Beard's hypnotic demonstrations, which came to so abrupt an end during the meeting of the International Congress in London, in August last. The letter containing these observations is pronounced "intemperate," the questions which I put to Dr. Beard are called "insulting," my treatment of him is said to have been "grossly unfair," my ignorance of the subject on which I write is characterized as "absolute," and my motives in overwhelming Dr. Beard are represented as not being above reproach. I do not refer to these vigorous epithets for the purpose of complaining of them, but rather to congratulate myself on having fallen under Dr. Hammond's displeasure, and merited some selections from his vocabulary of invective. When I consider the character and probable effects of his defence of Dr. Beard, I am reconciled to his unfavorable opinion of me, and sincerely trust that I shall never enjoy his advocacy.

And Dr. Hammond's outspoken candor has another advantage besides assuring me of freedom from his equivocal patronage and that is that it justifies me in using plain terms in replying to him, and in telling him at once what I propose to prove, that his letter is sophistical and evasive.

Before dealing in order with the several clauses of Dr. Hammond's letter, I may just say that the questions which I put to Dr. Beard in the *British Medical Journal*, and which Dr. Hammond repeats, may appear somewhat contumelious if viewed apart from my description of Dr. Beard's hypnotic demonstrations, to which they are merely an appendix. When it is borne in mind, however, that I had given an account of a series of experiments submitted by Dr. Beard to a professional audience, which were not failures, as Dr. Hammond calls them, but impositions, and that very unpleasant inferences were liable to be drawn from Dr. Beard's relation to these experiments, and from the attitude which he assumed when their mendacity was exposed, it will be allowed, I think, that such questions were necessary and not affronting. They took for granted that Dr. Beard had done himself injustice in the chagrin and confusion of finding his elaborate "trancoidal" structure suddenly collapse and they afforded him an opportunity of setting himself right with his professional brethren, by admitting that he had been deceived, and repudiating certain compromising allegations made by his trained subject or pet patient. Dr. Beard has not availed himself of this opportunity, but Dr. Hammond has stepped forward to vindicate his fair fame and to champion the hypnotic creed, in which it seems he too is a devout believer.

I have been bold enough to say that Dr. Hammond's letter is sophistical and evasive, and I think that assertion is warranted by the way in which he meets my first interrogation, which asks whether Dr. Beard knew, when he brought his trained subject to this country, that he was passing under an assumed name, and whether he withheld the knowledge of that fact from several parties of medical men who had witnessed his experiments, and from the meeting on the sixth of August, until it was elicited by cross-examination? Ignoring the circumstances under which the assumption of a fictitious name by Dr. Beard's trained subject had taken place, and under which it was detected, Dr. Hammond lays stress on the obvious truths, that two names may be borne by the same person innocently enough, and that, in many scientific investigations the cognomen of the human subject experimented on is a matter of no moment. But everything depends on the motives and circumstances under which a supplementary appellation is adopted and used. It is no discredit to Lord Lytton that, with the sensitive modesty of a young literary aspirant, he first came before the world as Owen Meredith, but it was very much to the disadvantage of a lady now undergoing penal discipline in this country, that she was proved, while seeking her fortunes as an adventuress, to have passed as Mabel Wilberforce and Mrs. Trenefidi. A royal personage may travel incognito without incurring suspicion; but a book canvasser, which Dr. Beard's trained subject confessed to be, can scarcely take the road under an alias without attracting the attention of the police. Had Dr. Beard's trained subject been exhibited to illustrate a malady recognizable by objective symptoms alone, such as tumor of the cerebellum, or mitral stenosis, it would have been of no consequence whether he had twenty names or no name, but as he was exhibited to illustrate a condition recognizable by subjective symptoms alone, and which might be physiological, pathological, or criminal, his style and designation become facts of extreme significance in relation to the inquiry in hand. Everything depends on the purpose with which a counterfeit name is put on, and on the situations in which it is employed; and Dr. Hammond cannot be allowed, by the ingenious introduction of cases that are in no sense analogous, to divert attention from the exact circumstances under which Dr. Beard's trained subject was proved to be sailing under false colors.

The trained subject was brought to this country to exemplify the phenomena of artificial trance, which are attributable either to an abnormal condition of the nervous system or to fraud. In deciding to which of these sources the phenomena were to be traced, it was surely of paramount importance to determine whether the man exhibiting them was a person likely to lend himself to fraudulent pretences, or was of such unimpeachable moral character that there was no probability of his condescending to deception. The proof that his character was good would not have established the genuineness of such unusual phenomena, but the proof that it was bad would have created the strongest possible presumption that they were spurious. Character is, indeed, the essential point in an inquiry of this kind. When a man throws himself into an ecstatic posture, squints, and delivers sonorously some sentences of a temperance lecture, and then declares that he spoke unconsciously and in a trance, I know not what test can be applied to his statement except a reference to his general credibility. His statement is at variance with common experience. If it be made by a man of known probity and truthfulness it may be entitled to some credit, but if it be made by a notorious rogue it may be tossed aside as worthless. Character is, therefore, the very touchstone of such a statement, and a name is the label that guides to the investigation of character. Those whose characters will not bear investigation often carry two or three such labels about with them, and the fact that Dr. Beard's trained subject was found, when searched,

to be in possession of two, naturally awakened distrust. It was of course possible that he might have satisfactory and blameless reasons for having changed his name, but it is to be noted that while he offered at one time confidentially to disclose his real name to two members of the company, he instantly withdrew that offer when informed that his communication would be made use of for the purpose of inquiring into his antecedents. When asked pointedly whether he had ever been an inmate of any hospitals, asylums, or gaols he vouchsafed no reply. It is still possible that Dr. Beard's Mr. Baker (for that was the name he was introduced by) may be a man of unsullied reputation, a Nathaniel in whom is no guile, but if so why is his incognito still preserved? Why is his past history not spread out before us like an open book, on the pages of which might be read the confusion of those who have dared to believe that such an one could condescend to practice trickery? Until we know Mr. Baker's true name and history we are bound to hold that he is not the sort of witness in whose testimony respecting the occult phenomena of hypnotism any confidence can be placed.

I have said that, in the investigation of hypnotic phenomena, evidence of the good faith of the person displaying them is of paramount importance; but I should have qualified that statement by adding when the phenomena themselves are not obviously simulated. It was at the outset of the Jermyn Street séance, when Dr. Beard's trained subject had given one demonstration—that of the temperance lecture, the true character of which could only be settled by a reference to credibility—that the discovery was made as to his assumed name. And at this point the discovery seemed of such vital significance, that most of those present desired to proceed no farther with the experiments, believing that they would be all of the temperance-lecture class, and capable of being tested only in the same way. Fortunately, however, they were allowed to proceed, under protest, and as they went on, the importance of the discovery of the assumed name diminished much, for the experiments themselves were unmistakably stamped with deception. Had the trained subject been proved to be the identical boy who never told a lie, and the bearer of an ancient and stainless name, his performances would still have been regarded as hollow mockeries. "Not all the blood of the Howards" could redeem them from their inherent vices, about which Dr. Hammond has nothing to say. He overlooks the fact that the trained subject, while engaged in muscle-reading, and pretending to interpret the delicate movements of the hand of one gentleman pressed against his forehead, was shown to have followed the indications given by the fixed gaze of the eyes of another gentleman with whom the owner of the hand had just been in conference. He forgets that the trained subject was proved to have heard what was said at a time when he professed to have been unconscious, and he omits to notice that his alleged freedom from vertigo during rotation was demonstrated to have very narrow limits, and his opisthotonic spasm to be only voluntary effort.

Having established that credibility depends on moral character; that a mania is a key to moral character; and that Dr. Beard's trained subject declined to hand over that key to those who were investigating his hypnotic performances, which turned out mere clumsy imposition.

I must next ask whether Dr. Beard was justified in concealing from his professional brethren, whom he had assembled together to witness "the most recent discoveries in this department of psychology," the fact that his trained subject was passing under an assumed name. The trained subject said "Dr. Beard knows well enough I am not travelling under my own name;" and Dr. Beard, who had presented him as William Baker, did not then deny the assertion, and has not since denied it. Was he warranted then, in withholding his knowledge of the fact? Dr. Hammond answers yes, and argues that if Baker's true name was mentioned to Dr. Beard in confidence, he was bound to keep it secret. No fine sense of ethical propriety is required to perceive Dr. Hammond's error and the obligation that lay on Dr. Beard if he exhibited this trained subject at all, to divulge either his real name, or the fact that he was passing under an assumed one. The fact of the assumed name was not a trifling or irrelevant detail, but was material to the issue submitted to the meeting, and to suppress or omit a fact material to the issue in a medical inquiry, is to offend against a well understood code of professional honor. It behoved Dr. Beard not only to mention that Baker was passing under an alias, but to state explicitly the inducements offered to him to abandon his ordinary means of livelihood, and honor the International Medical Congress with his presence. All possible springs of action should be disclosed when complicated improbabilities have to be scientifically analyzed. Drs. Beard and Hammond aver that moral character is of no consequence in relation to hypnotism, but they must surely have done this unreflectingly. Every writer on the subject knows that it is of the essence of the inquiry. Mr. Romanes, in defending Heidenheim's experiments which I venture to think are, in many respects fallacious, advances, as the strongest argument in their favor, that a great many of them were performed on his own brother, "who, to say the least, would not be likely to stultify his distinguished kinsman;" and Dr. Hammond, in spite of what he says himself, displays a keen appreciation of the importance of character where credibility is concerned. At the beginning of his letter he thinks it well to bestow an encomium on the moral attributes and mental methods of Dr. Beard. That gentleman, it appears, has always "had the good sense" to take Dr. Hammond's animadversions "with kindness, and in the true scientific spirit," and he will, perhaps, therefore submit with becoming meekness to what many would regard as the gross indignity of having it certified in a professional journal, that his august censor has "never observed in him the slightest tendency to dishonesty."

My second question to Dr. Beard, whether he knew that his trained subject had taken part in mesmeric and spiritualistic performances, and whether he withheld the knowledge of that fact from his audience at Jermyn Street, is met by Dr. Hammond with a direct denial. He is "very positive, as a matter of fact" that the trained subject, with whose career he seems to be curiously familiar, "never did take part in mesmeric or spiritualistic performances." Well, Dr. Hammond and the putative Mr. Baker must settle that point between them. The latter distinctly told the meeting in Jermyn Street that he had been "in the mesmeric line," and had also taken part in spiritualistic reunions, though he refused to name the medium with whom he had performed. And not only so, but he clearly betrayed his spiritualistic experiences, when, much to the disgust of Dr.

Beard, he interfered with the proceedings when they were not going quite smoothly, to tell those present that he could not show them his full powers unless they were in sympathy with him, that an atmosphere of doubt was fatal to hypnotism, and that, if his manifestations were to be carried out, all those around him must put implicit faith in him, advice which it was difficult for the audience to follow in full view of his somewhat unprepossessing countenance. By a slight *error loci*, Mr. Baker used the language of Mr. Sludge, the medium in the lecture-room of Dr. Beard; and, with no undue leaning to put blind trust in Mr. Baker, I am inclined to accept his statement that he had graduated in spiritualism before commencing the study of the higher branches of hypnotism. "But supposing," says Dr. Hammond, "that he had done this (which I positively deny), what bearing would it have on his hypnotic demonstrations?" And here one is in courtesy bound to credit Dr. Hammond with just a little of that "natural obtuseness" to which he diffidently lays claim, in order to avoid a less complimentary explanation of the position which he takes up. To argue that a previous history of spiritualism should not influence one's judgment of a person professing to exhibit hypnotic phenomena, is equivalent to maintaining that a previous conviction of forgery is irrelevant in the case of a comparative stranger applying for a loan of a hundred pounds. Spiritualism is a school of demoralization or superstition, and those who have been educated in it are not the kind of witnesses to whose evidence respecting hypnotism practical physicians would be willing to attach any weight. Had Dr. Beard told his audience at Jermyn Street, at the outset, that his trained subject was a retired medium, or a runaway apprentice of spiritualism, it is certain that a large majority of them would have refused even to look at his hypnotic absurdities, and it can scarcely be doubtful, I think, that he was not justified in withholding a fact the knowledge of which would have so powerfully influenced his guests, supposing, of course, that he was acquainted with it.

My third question to Dr. Beard is especially obnoxious to Dr. Hammond, who calls it "an intimation of fraud," and an attempt to "confuse" Dr. Beard "and prejudice" the case against him. The question runs thus: Had he never, until the exposure of the 6th of August took place, had any suspicion that any part of his trained subject's performance was a mere piece of acting? and the inquiry seems natural enough, considering that the whole of his performance on the 6th of August was pronounced a mere piece of acting by a highly competent tribunal. Dr. Beard's perceptive faculties are acute, and it seemed singular that, having watched the trained subject for months, he should never have suspected what was patent to everybody at one interview at Jermyn Street. But in several nervous disorders, simulation goes hand-in-hand with the genuine symptoms of disease, and I submit, therefore, that there was nothing disrespectful in requesting Dr. Beard to say whether he had seen reason to surmise such a mixture in this particular case, and if so, to define what was in his eyes really hypnotic, and what mere histrionic exaggeration. He teaches, I understand, that personation is one of the symptoms of hypnotism, and it is but fair that he should be called on to distinguish hypnotic from ordinary personation.

Turning to my fourth question to Dr. Beard: Did he inform his audience that he had exhibited his experiments before the Academy of Medical Science at New York; and was that statement promptly and emphatically contradicted by Dr. Adams, the Secretary of the Academy, who happened to be present? I find that Dr. Hammond gets rid of it in a juggle of names. But I cannot permit it to be disposed of in that way. Dr. Beard told the meeting that he had exhibited his experiments to a society in New York, which I understood him to call the Academy of Medical Science, but which I now gather from Dr. Hammond he must have called the Academy of Medicine. But whatever he called it, his statement was flatly contradicted by Dr. Adams, and Dr. Beard had not then a word to say for himself, but, in plain English, stood abashed before the meeting, which indulged in an emotional expression, something between a pish and a pshaw! Had reporters been present, the word "sensation" would have been introduced at this point in their account of the proceedings.

My fifth and last question to Dr. Beard was as follows: Was he invited, after the failure of his trained subject to secure confidence, to join the meeting in expressing satisfaction that a gross case of deception had been exposed, and did he refrain from making any response to that appeal? That the invitation was extended to Dr. Beard, and that he did not embrace it, is undoubted, but that embarrassment and American nervousness might have prevented him from doing so was possible, and so it seemed well to recall the matter and afford him in calmer moments a chance of gracefully following the example of Mr. Houblier, who, when his pupil Mlle. Emélie, a wonderful hypnotist in her day, was convicted by the French Academy of Medicine of being a miserable trickster, acknowledged, with grief and shame, that he had for four years been the dupe of an artful woman.

Having commented on Dr. Hammond's criticisms on the catechism which I prepared for Dr. Beard, and of which he has taken no notice, I shall not here discuss the former gentleman's assertions respecting hypnotism, which are scattered through the letter that has appeared in your columns. Hypnotism is a name covering some real facts and an infinite deal of falsehood. I do not pretend to know what has been done, or not done, in the name of hypnotism by Dr. Hammond in New York (his professional brethren on the spot are best able to judge of his experiments there), but this I do know, that the phenomena of hypnotism, submitted to the medical profession in this country by the physician whom Dr. Hammond indicates as its most profound student and accomplished exponent, were transparent humbug. If Dr. Hammond can give no better proofs of the faith that is in him than those adduced by Dr. Beard, I shall be compelled to believe that his laborious inquiries into hypnotism are analagous to the Scotch Hallow'een pastime of winnowing three weights of nothing, in the hope of seeing an illusion. He and Dr. Beard have yet to prove that they possess the most elementary and essential qualification for a successful student of hypnotism—a power of weighing evidence in relation to such obscure questions, and of discriminating between chicanery and plain dealing. Until they repudiate some of their ridiculous heresies, such as the belief that a hypnotized person, with his eyes securely bandaged, can read a book through the skin of his forehead, it is almost a waste of time and loss of dignity for any man of science to argue with them on this topic.

Dr. Hammond, I presume, through hypnotic lu-

cidity and penetration of thought, knows exactly the motives with which I went to Dr. Beard's meeting, and these he elegantly sums up as an "overpowering intention to bring him to grief." There was a deep-laid scheme, Dr. Hammond surmises, to overthrow Dr. Beard, whatever he might say or do. Now, my motives are of no great interest to any one, but as they have been referred to, I may just say that my presence at the meeting was an accident, as, until a few minutes before I found myself there, I had not thought it possible for me to avail myself of the invitation which had been sent to me. I went to the meeting with no unfriendly feeling toward Dr. Beard, for I had had some pleasant intercourse with him at Cambridge, and had been favorably impressed by the suggestiveness of such of his writings as I had read, and with no conception that it would be requisite to make a stand for scientific truth. My suspicions were first aroused by a hint from Dr. Horatio Donkin, who had arrived before me, and whose quick insight had at once perceived the true nature of the performance with which we were to be favored, but it was what actually took place at the meeting that animated me, as it did many more who were present, to offer unflinching resistance to mystification when brought forward as new revelations in the science of psychology. Preconceived notions did not influence our action. Preparation for the exposé there was none. Had we had an inkling of what was to take place, and five minutes in which to arrange our plans, the demolition of Dr. Beard's hypnotism would have been more final and complete than it was. Perhaps, however, there is no cause to repine. On the spur of the moment a wound was inflicted on it which, like Mercutio's wound, although not "so deep as a well, nor so wide as a church door," will prove "enough—'twill serve."

It is an ungracious task to refute error and unmask deception, but it is a needful one in these days, and one peculiarly incumbent on those practitioners of medicine who love and honor their profession, and desire to secure for it a large measure of public usefulness and respect. In no way can the profession of medicine be more surely degraded than for those who follow it to exhibit a childish credulity or countenance the arts of the charlatan. Empiricism is the sin that doth most easily beset it, and it behooves the profession, therefore, jealously to guard itself against any teachings or practices that tend in that direction. That the teachings and practices of hypnotism may have that tendency will scarcely be gainsaid, and hence the duty imposed on the medical profession, to keep a vigilant eye on hypnotic manifestations, and to repudiate at once any sympathy or connection with the vagaries and cheats and quackeries, that are apt to gather round the small central nucleus of established hypnotic facts. Ample toleration must be shown to the widest diversities of honest and intelligent belief, but no quarter must be given to the delusions of the weak-minded, the whims of the superstitious, unworthy pretensions of those who are in too great haste to grow rich.

I am, sir, your obedient servant,

J. Crichton Browne.

7 Cumberland Terrace, Regents Park, London.

Queen Victoria has donated her old linen to St. George's Hospital. This mark of royal favor is no doubt duly appreciated.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 25, 1881, to December 31, 1881.

Summers, Jno. E., Lieut.-Colonel and Surgeon, Medical Director Dept. of the Platte. The leave of absence granted him in par. 6, S. O. 123, Dept. of the Platte, December 1, 1881, is extended one month. S. O. 135, Mil. Div. of the Missouri, December 28, 1881.

Havard, V., Capt. and Asst. Surgeon. Now en route from Fort Davis to San Antonio, Texas, assigned to temporary duty at Headquarters Dept. of Texas, and to report to the Medical Director for instructions. S. O. 154, Dept. of Texas, December 12, 1881.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 31, 1881.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 24, 1881.	0	22	255	7	115	137	24	0
Dec. 31, 1881.	1	6	335	9	184	152	28	0

Dr. Edward Reynolds, the oldest physician in Boston, died December 26th, at the age of eighty-nine years. He was graduated from Harvard College in 1811, and was a class-mate of the late Edward Everett, the late Chief-Justice Dunkin, of South Carolina, and the late Chief-Justice Lane, of Ohio.

Extra-Uterine Pregnancy in a Quail.—Dr. G. Frank Lydston, of Chicago, formerly house surgeon to Charity Hospital, B. I., sends us a unique contribution to comparative pathology.

"In dressing a quail, a tumor was found in the abdominal cavity, free from adhesions at any part. It measured about seven inches in circumference, and weighed two and one-fourth ounces. Section revealed a number of laminæ, composing the walls of a cyst about as large as an almond. The cyst-walls were arranged in layers, the two internal being distinct from those external, and separated from them by a layer of grumous material resembling the yolk of an egg after partial cooking. The cyst itself was empty. Microscopically the laminæ were shown to consist of connective tissue, and the grumous matter of oil-globules, granular matter and epithelial cells.

"The external layer of the sac was rough and of a brownish color.

"The tumor was evidently an abortive ovum which failed to enter the oviduct, and falling into the abdominal cavity had become encysted by successive layers of fibrinous deposit."

Dr. Lydston has heard of one similar case in a domestic fowl.

Curious Relation between Diphtheria, Eczema, and Erysipelas.—Dr. G. H. Felton, of Lynn, Mass., relates the following history: "On the 15th of November, a boy, eight years of age, after an illness of five days, died of laryngeal diphtheria. One week later I was called to see his brother, about eighteen months old. This child had been for some months suffering from aggravated eczema of the scalp, and during my attendance upon the previous case his head was covered with crusts, though he was said to be much better than previously. At this time he was a strong, well-nourished child, with good appetite, and, with the exception of the eczema and a bronchitis of a few weeks' standing, apparently in vigorous health. I was sent for on account of a swelling under the jaw, which, under the circumstances, the parents feared might be diphtheria. The eczema was, at the same time, becoming considerably aggravated. I found that the swelling extended around the neck, being quite as marked posteriorly as elsewhere, and, on examination, could find no evidence of diphtheria, and so informed the parents. Struck, however, by the suspicion of an erysipelatous inflammation, remembering also the diphtheritic contagion to which the child had been exposed, and in view of the occasional association of the two diseases, I prescribed tr. ferri chloridi in liberal doses with potassium chlorate. The case grew continually worse, however, and three days later his head was immensely swollen, one eye closed and emitting a sanguino-purulent discharge. The swelling posteriorly extended down to the nates, the face and neck presented the appearance of erysipelas, while the scalp was a mass of corruption. The cough was loose and the secretion abundant; but, while an examination of the throat was now impossible, there was no more evidence of diphtheria than at my first visit. The child died the next morning, no new symptoms having intervened."

Dr. Felton offers, in explanation of these clinical facts, the plausible theory, that the poison of diphtheria in the first patient acted upon the eczematous scalp of the second, producing an erysipelatous inflammation. This idea is in harmony with current views regarding the relation of the diphtheritic and erysipelatous poisons.

The International German Exhibition for Hygiene and Life-saving.—We have already published some facts regarding this proposed exhibition, which is to take place at Berlin next year, lasting from June 1st to October 1st.

We are in receipt of a letter and circular calling our attention to some of the special features of the exhibition. Thus it is not intended, we are told, to arrange the exhibits in groups, strictly after the classification laid down. They will be distributed in such a manner that objects relating to each other stand in mutual connection. One part of the building, for instance, represents a battle-field with plastic figures of wounded soldiers, surgeons, etc.

Americans are cordially invited to co-operate in this exhibit.

The Wisconsin State Vaccine-Farm.—The Wisconsin State Board of Health runs a vaccine-farm near Fond du Lac, under the charge of its President, Dr. E. L. Griffin, of that city. During two weeks Dr. Griffin has produced from sixty thousand to seventy thousand points, which have been distributed throughout the Northwest, where the small-pox excitement exists. At the Wisconsin farm, Dr. Griffin and his associates have vaccinated about one thousand heifers since they commenced their work of production. The most successful operations are upon the light-haired heifers, those dark in color always having tough skins. From some animals one thousand points are taken, while others produce none at all.

Another Case of Pendulous Uterus.—Dr. J. W. Brown, of Mottsville, N. Y., relates the history of a case of pendulous uterus, somewhat similar to one recorded by the same observer in the Record of April 12, 1879.

The patient was a large-framed Irish-woman, aged thirty-seven, in her seventh labor. The pains had lasted about eight hours when Dr. Brown was called in. He found her feeling weak and tired, with frequent non-expulsive pains. Upon placing his hands upon her abdomen he was surprised not to feel the uterus, but on examination it was found completely retroverted; the fundus, from the stretching of abdominal muscles lying upon the thighs, midway to the knees when in erect posture. Vaginal examination revealed os fully dilated, with head engaged in superior straight. Vagina hot and dry. The uterus was replaced by gradual external manipulation and the application of a sheet made into a bandage (cravat-like), and gradual "cinching" about the shoulders. Pains became as a consequence more expulsive, but after patiently waiting about an hour and finding head was so wedged that no advancement was made, the long forceps were applied and a living female child was delivered. Flooding was profuse, but by grasping the fundus uteri and administration of Squibb's ergot, and allowing placenta to plug the uterine orifice, he succeeded in controling it. Placenta was normal in appearance and size, and came away with gentle traction in the course of an hour. There were no bad after-symptoms.

Syncope from Catheterization. — At a recent meeting of the St. Louis Medico-Chirurgical Society, Dr. Hodgen stated that a patient once came into his office complaining of a stricture. He introduced a sound very gently, but the man almost died on the table, the heart ceased beating, and respiration was arrested; hypodermic injections of sulphuric ether stimulated the action of the heart, and in a few moments he recovered; but the doctor did not make another attempt to pass a sound for several months, during which time the patient was kept upon tonics, and his allowance of stimulants was cut down, as he was a free drinker. After several months of such treatment, another attempt was made to pass an instrument. There was a very great depression, similar to that produced before, though less marked than at that time.—*St. Louis Courier of Medicine.*

Quebracho in Emphysema and Dilated Bronchi. —Dr. Jas. H. Low, of this city, relates the history of a patient who for several years had suffered from what had been considered phthisis. Dr. Low, however, diagnosed emphysema with bronchiectasis. He placed the patient on cod-liver oil and iron. After some improvement had followed, he prescribed quebracho in twenty minim doses, twice daily, increasing this dose gradually. Dr. Low thinks that the remedy has done some good.

Meat Extracts.—From analysis by C. T. George, reported in "Proceedings of Pennsylvania Pharmaceutical Association," it appears that "Valentine's Meat Juice" contains but a trifling amount of albumen. The total amount of dry extract in a dollar

bottle is about six drachms. "Johnson's Fluid Beef" contains thirty per cent. of dry extract soluble in water, thirty-three per cent. of dry muscular fibre, ten per cent. of ashes. It contains no albumen. The objection to this otherwise excellent preparation, says Mr. George, is the fact that it is packed in tins. The extract acts upon this, and in that part near the sides, tin was found.

Free Quinine.—The drug journals state that the firm of White & Co., of this city, manufacturers of quinine, has failed on account of quinine being free, while the agents used in its manufacture are not. It is noticeable that there is a much stronger demand that the duty be reimposed on quinine, than that it be taken off the article used in its manufacture.

Artificial Quinine.—There have been rumors for some time that artificial quinine could be made, and was indeed being largely manufactured. The process was apparently one of child-like simplicity, and consisted only in bringing together dihydrolepidin, dehydroethylpyridin, and the chloranhydride of chloropropinic acid. A substance obtained in this, or some similar way, and called chinolin tartrate or artificial quinine, has been used by Dr. Schapringer in the Jewish Hospital, Philadelphia. It was found to have slight antiperiodic properties, but to be far inferior to quinine.

In Belgium there are 2,111 medical men and 2,130 midwives, the population of the country being 5,500,000. This makes about one doctor and one midwife to every thousand of the population.

A New Physiological Station in the Bois de Boulogne has been given to M. Marey, to allow him to study the functional movements of various animals.

The Bacillus of Typhoid Fever is a new microorganism which Eberth, of Zurich, has recently described. He considers it the cause of that disease.

Another Special Bacterium is that described by M. Gibier as being the cause of acute pemphigus. The orgahism consists of a series of individuals arranged in strings. These are $\frac{1}{4000}$ mm. wide and $\frac{1}{1500}$ to $\frac{1}{1000}$ mm. long. The disease is not contagions.

The German Universities, twenty-one in number, contain four thousand eight hundred and eighty-three students of medicine, surgery, and pharmacy the present year.

A Case of Ovarian Pregnancy—Autopsy.—Dr. S. Mitchell, Jr., of Hornellsville, N. Y., sends the following history of a case of ovarian pregnancy, in which the trouble was not diagnosed before death:

"The patient, a married lady, aged thirty-four, one year before had begun to suffer from a tumor in the right ovarian region. She ceased to menstruate and had no return of the same until five months afterward, when she again became regular and remained so until her death. At this time the abdomen was of the size to indicate about the fifth month of pregnancy, but the absence of motion and the return of the menses, convinced her and her friends that pregnancy did not exist.

"Two weeks previous to her death she was induced to seek the advice of a female physician of Buffalo; she was also seen by Drs. Van Payner and Harrington of the same city. On the afternoon of August 5th, the latter of the physicians explored the enlargement of the abdomen with the needle of a hypodermic syringe, and drew off some fluid, which was found to be pure and laudable pus. What their diagnosis was I do not know.

"The patient suffered considerable shock from this operation, followed by pain and all the symptoms of moderate periteneal inflammation, which was so far controlled by treatment as to allow her to return home at the end of three days, ninety miles, on the cars. The week following she continued to suffer pain at intervals, but was comparatively comfortable, and so expressed herself on retiring Monday evening. She was awakened toward morning by a severe pain in the hypogastric region, which she described as 'tearing and griping,' with the sensation of something giving way. This was followed by the symptoms of collapse, and death ensued in a few hours.

"An autopsy was made by Dr. Mitchell, forty-two hours after death, in the presence of Drs. Baker, Mitchell, Look, and Parkhill. An incision through the abdominal wall disclosed peritonitis. Adhering to the peritoneum was a fleshy-looking, membranous sac, situated above and completely covering the uterus and bladder. It contained nearly three quarts of thick, creamy pus, and was found to be ruptured at its apex, the contents flowing into the abdominal cavity. The sac, by its attachments, proved to be the right ovary, and after it was evacuated and turned inside out, there was found a large incisor tooth, a small piece of bone, and a piece of hairy scalp, all attached to the inner surface of the sac by means of a triangular, fleshy mass, resembling a rudimentary placenta.

"The pus was found filled with loose, floating hairs, some of which were ten inches in length."

The Mathematical Convolutions.—Bert Wagner, of Fort Wayne, Ill., asks: "If a clot were found in the post-mortem in the convolution or convolutions immediately under the anterior superior angle of the parietal bone, and it was known that the deceased had been an accountant or mathematician, and had been rendered unfit to have charge of his books or class in mathematics, could it not be said with propriety (other experiments and observations showing the same result), that those convolutions were the seat or origin of mathematical calculation?"

To which we answer, certainly not—and refer our correspondent to any standard work on nervous diseases: Hammond, Rosenthal, Hamilton, Ross, etc.

A Caution to Pulmonary Gymnasts.—Dr. D. F. Powell, of La Crosse, Wis., sends us the following useful hints. He writes:

"Ten years ago my chest measurement during full forced inspiration was thirty-seven inches. By systematically inhaling and distending the air cells as recommended by Niemeyer (and Smith, in Medical Record of October 29, 1881), I have increased chest measurement to forty-four inches, and have wonderfully developed the pectoral and intercostal muscles. I write this to warn those who may adopt pulmonary gymnastics, against inspiring air at too low a temperature, as I have on several occasions suffered from acute bronchitis, brought on by the forced inhalation of "raw" cold air. I find that deep inspirations of pure air, at a temperature of from 60° to 80°, are of marked benefit in nearly all incipient lung diseases. I also freely use air medicated with carbolic acid, tar, iodine, bromine, nitrate of potash, etc., as indicated, and believe that no other treatment equals it as a remedial agent."

Original Lectures.

NON-SPECIFIC GONORRHŒA — REFLEX IRRITATION PRODUCING SYMPTOMS OF STONE IN THE BLADDER.

A Clinical Lecture,

By FESSENDEN NOTT OTIS, M.D.,

CLINICAL PROFESSOR OF VENEREAL DISEASES IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

NON-SPECIFIC GONORRHŒA IN A CHILD.

Gentlemen: I have an opportunity to-day to show you a case which goes to prove that we may have a gonorrhœa of a non-specific origin. You will remember that on a former occasion I spoke of what seemed to me a most important fact, namely, the possibility of an inflammation of the mucous membrane of the vagina in young children, identical with gonorrhœa, and yet without any suspicion of venereal contact, but being apparently the result of an irritation reflected from a distance, as, for example, from the rectum by the presence of ascarides. Now, to those who are accustomed to dispute everything, and admit nothing but absolute proof, it might be difficult to show that, in the cases on record, care had been taken to exclude every possible cause of the disease other than the one named, viz., ascarides in the rectum. It might be difficult to prove that there had been no possible chance of conveying the material from a specific urethritis or inflammation—for example, conjunctivitis to the vagina, by means of the hands or some other medium. But when we have repeated instances of inflammation of the vaginal mucous membrane, taking on all the characteristics of an inflammation of a specific character, in which there was no known or suspected specific cause, the only common-sense way of accepting the matter is to do as eminent authorities have done, attribute its origin to irritation reflected from inflamed neighboring organs. Such a cause I consider capable of setting up an inflammation which we may accept as a gonorrhœa capable of communicating an acute purulent conjunctivitis which is not at all less in grade than that which comes from a well-known gonorrhœal source—an inflammation which can be communicated to the healthy male urethra, which may extend from thence to the epididymis, as in ordinary gonorrhœal trouble, as in the case reported by Dr. Robert Watts, and referred to at our last session.

This little child was sent to us from one of the dispensaries, to obtain an opinion of the character of a vaginal discharge which has been present. My opinion coincides entirely with that of the doctor who sent the child to us—that there was a vaginitis which had resulted in a profuse discharge of pus, such as we are accustomed to associate with an ordinary contagious vaginitis, being a little greenish in color, but in other respects not differing from an ordinary leucorrhœa. The question was as to its cause. I suggested its probable origin from a knowledge of the manner in which such cases have been known to occur, as previously related to you, namely, as the result of the presence of ascarides in the rectum. The mother was directed to make injections of lime-water into the rectum, and watch for the escape of ascarides. This was done, and the mother now says that she found in each passage plenty of little worms which looked like white threads—a pretty good description of the ascarides. I think, therefore, we may accept the origin of the vaginitis in this case to be, as was claimed, from the presence of ascarides in the rectum. The vagina has been kept clean, and the inflammation has subsided considerably, and at present the purulent discharge has almost ceased.

Gonorrhœal inflammation does not differ in its characteristics, whether it affects the mucous membrane of the urethra in the male, or the mucous membrane of the vulva or of the vagina in the female. The products of the inflammation are the same, and its progress in the female may be said to be similar to that in the male, being liable to extend from the vagina to mucous tracts connected therewith, so that in the female we may have as complications of specific inflammation of the vagina a gonorrhœa of the urethra, the uterus, the Fallopian tubes, and of the ovaries. It is true some of these are rare complications, but they may occur. For reasons which you can readily appreciate, the rectum is seldom the seat of gonorrhœa, but is so occasionally. I have had the opportunity of seeing several cases of rectal gonorrhœa—one in my practice which I was able to watch from beginning to end. It occurred from connection per rectum. A gentleman had a gonorrhœal discharge, and, wishing to avoid giving his wife gonorrhœa, had connection by the rectum, the result of which was that she had a gonorrhœa of the rectum which continued for three or four weeks, and was attended with the ordinary symptoms, inflammation and mucous discharge, with straining and great discomfort on defecation.

The treatment in these cases of female gonorrhœa does not differ greatly from that we employ in the male. Of course, we have greater advantages in approaching the mucous surfaces of large channels, like the vagina and rectum, and can make our applications with comparative ease, and, consequently, after the highly inflamed stage of the disease has passed, we derive benefit from tolerably frequent astringent injections. During the acute stage, the introduction of instruments into the vagina is very painful, and aggravates the difficulty, but we can almost always introduce a small syringe, and bathe the surface with some bland, unirritating fluid of a slightly astringent character, using perhaps three, four, or five grains of alum to an ounce of water. As the acuteness of the attack passes off, more active treatment may be employed, and I have seen chronic cases very much benefited by strong solutions of nitrate of silver, five or ten grains to the ounce. There is not that danger attending the use of injections of this kind in the vagina which attends their use in the urethra. I have been in the habit, in some cases, of taking a solution of nitrate of silver, five, or even ten grains to the ounce, in cases in which the discharge is persistent, and, having passed in the speculum, pour the solution into it, and gradually withdraw it in a manner to bring the solution in contact with every part. Astringents and absolute cleanliness play the chief part in the cure of gonorrhœa of the female. Internal remedies, such as copaiba, etc., are worse than useless.

The disease in the female, just as in the male, usually lasts four or five weeks, and if carefully managed is not likely to continue a much longer time, but unless applications are made to every part of the mucous membrane it sometimes lasts indefinitely. The sensitiveness of these parts is not at all great in the subacute form, so that patients' attention is

not drawn to it, and they often go on communicating gonorrhœa to others without being aware of having it themselves. In the later stages of the disease the inflammation may be entirely absent from the vulva and lower portion of the vagina, and yet linger in the deeper portions of the canal, unknown to the patient herself.

REFLEX IRRITATION PRODUCING SYMPTOMS OF STONE.

This man, gentlemen, has some of the symptoms of stone, and was examined therefor a month ago. The history of the case reads as follows: "He complains of frequent and painful urination, pain being present both before and after. There is occasionally a whitish discharge at the meatus urinarius. A No. 30 sound was passed, and he was ordered diluents and alkalies. September 15th, analysis of the urine showed amorphous urates in abundance, but nothing else. October 13th, pain in the penis, rises at night to urinate. Connection increases the soreness in urethra. He denies all previous venereal disease. He was then given nitro-muriatic acid and something to relieve dyspeptic disturbance which was probably cause of irritant qualities in the urine."

The patient, in reply to my questions, says that about four years ago he had constant pain about the left iliac region, which continued four or five months; that a year and a half ago he had to urinate as many as fifteen times during the day and a dozen times during the night; that he was examined for stone twice before he came to this clinic; that he had pain at the head of the penis, and that on one occasion he passed a clot of blood in his urine. Riding in a wagon causes him pain and makes his symptoms worse. He thinks that the medicines which he has been taking during the past month have benefited him.

There are so many symptoms in this case which point to the presence of stone in the bladder that it is desirable we should make another exploration. The history of pain, referred to the region of the left groin, existing for some time, would certainly be a suspicious circumstance, although it is not the history of an ordinary attack of nephritic colic, one which comes on suddenly, pursues a tolerably rapid course, getting through in the course of a few hours, and ending with a sudden cessation of all the symptoms. It is possible that in his case the stone was small enough to pass down the ureter, but so large, however, as to pass very slowly, being months in doing so, but finally reaching the bladder. I suppose a stone might be an indefinite time passing down the ureter, blocking it up, and yet giving no very great amount of trouble. Within the last month in consultation I saw a case of obscure trouble which was referable particularly to the region of the liver, this organ apparently being enlarged, and the lower anterior portion of the right lobe the site of considerable tenderness, which led us to suppose there was an inflammatory process going on in the liver. There was some evidence of suppuration, in the presence of fever, sweating, etc. There was no evidence of disease of the kidneys or of any organ but the liver. The case went on for a while, when suddenly there was retention of urine, which, when it was relieved, was found to have accompanied a discharge of pus into the bladder. There had been, as before said, no suspicion of any trouble of the kidneys; the urine had been examined repeatedly and was found normal, and there had been no pain which could direct suspicion to trouble in this region. To make brief the history of the case (which in several other respects was a very interesting one), death occurred from uræmia in the course of two or three weeks, and at the post-mortem examination the entire secreting substance of the kidney was found to be destroyed and its place occupied by a sac filled with urine, which could not escape through the ureter on account of the presence of a uric acid calculus. I mention this case to show that it is quite possible for the kidney to be seriously disabled without causing symptoms which would direct your attention to that organ.

In this patient's case we have the history of constant pain, existing for four months in the region of the left kidney, and extending down in the direction which the ureter pursues to enter the bladder, and followed later by symptoms of stone in the bladder, such symptoms as pain at the head of the penis, blood occurring in the urine on one occasion, frequent urination, and aggravation of the symptoms on motion. These facts point very strongly to the existence of stone in the bladder at the present time. In a former case at this clinic you will remember that I examined for stone in the bladder and could detect none, but that on a subsequent occasion the stone was found. This illustrated the fact that stones sometimes become secreted and may be lodged in a sulcus in the bladder, or over the pubes, and cannot for the time being be detected.

I will now first examine this patient while he lies down, raising the hips so that the stone, if any be present, may roll to the fundus of the bladder. I pass the sound down the urethra with the greatest gentleness, allowing it as it were to find its own way down; and now, having introduced it, if it strikes against a stone I will recognize that fact by the clicking noise which it will make, just as it would do if the stone were struck by the metallic sound outside of the bladder. You observe that I move the sound gently back and forth, and from side to side, but I am unable to detect the presence of a stone. I also fail to detect its presence since he has assumed the standing posture. As I introduce my finger into the rectum, I fail to find any aid to the diagnosis; there seems to be a little induration of the prostate on one side, but nothing else abnormal.

It is not impossible, therefore, that these symptoms are due to some contraction of the urethra, probably within a short distance of the external meatus, for I have known all the symptoms of stone in the bladder to exist for months and even years, when no stone at all was present, and the symptoms were entirely due to contraction of the urethra, within half an inch of the orifice, this fact being demonstrated by the occurrence of complete relief immediately following division of the stricture. I had a case of that kind about ten years ago, a gentleman, sixty years of age, had suffered from frequency of urination for ten years, making his water, as he said, every hour in the day, and not quite so frequently during the night. For six months previous to the time I saw him he had made his water every half-hour when he followed his inclination, and for the three days he had urinated every fifteen minutes, but without pain. When I saw him he was sitting on a hot poultice, which had been advised by his wife's medical attendant, who was a homœopath, and was also taking a preparation of belladonna. By his bed was the *pot de chambre*, two-thirds full of urine, pus, and blood. From this fact I supposed it was a case of prostatic trouble in an old man with stone in the bladder. Although the patient was sixty years of age, I found absolutely no enlarge-

ment of the prostate. I was also unable to detect any stone in the bladder. Turning my attention to his urethra, I found the orifice about No. 24 French, and as the circumference of the penis was about three and one-half inches, it indicated a contraction of about ten millimetres. Dr. J. Marion Sims, who was a friend of the patient and had sent him to me, was sent for to consider with me the propriety of dividing the orifice. The patient objected to any operation whatever, but Dr. Sims accepted my statement as to the absence of prostatic trouble and stone, and expressed his opinion as to the possibility of the trouble being caused by contraction at the orifice from having himself seen similar reflex difficulties in his special practice, associated with uterine diseases. The patient finally consented to an operation. He was etherized, the stricture was thoroughly divided, a large-sized instrument was passed into the bladder. A further examination was made both by myself and Dr. Sims for stone, but with a negative result. The result was that there immediately began to be relief from the frequency of urination, so that within twenty-four hours the intervals had increased from ten or fifteen minutes to two hours and a half; within three or four days the intervals increased to three and more hours; and within ten days, without any internal medication whatever, so far as I remember, the patient was about his business, travelling several miles to and from. He remained well for a year or longer, when he was again attacked in the same manner. I was called to him, and found that there had been recontraction several millimetres, and I also found a small stone, not larger than a large-sized pea. I pleaded in vain for the privilege of removing it, but I divided the recontracted stricture and the operation proved quite as successful as on the previous occasion, when I found nothing to account for his trouble but the contraction at the orifice.

What I wish to impress especially by this case is the fact that the symptoms of stone in the bladder may be kept up for a long time, simply by a contraction of the orifice of the urethra, more especially a contraction not at the orifice, but half an inch farther back. I could relate many cases similar to the one just mentioned, and show that it is our duty when symptoms of stone in the bladder are present, to examine into the condition of the urethra for the possible cause.

Before proceeding to examine the calibre of this man's urethra, I will take the measurement of the circumference of the penis, for the proportionate relationship between these two measurements I insist upon, after ten years' experience, is a point of great value in diagnosis. I have never yet found a case in which this proportion did not hold sufficiently true to be a valuable guide to the surgeon. Now, we have an instrument, the urethrometer, by which anybody can measure the urethra for himself, and determine whether this question is correct or incorrect; he does not have to take anybody's word for it, but can test it for himself, and having made measurements in twenty or thirty cases, he will be convinced that the relation between the size of the urethra and of the penis is a mechanical fact.

I find this man's penis to measure three and three-fourths inches, which, according to the proportionate relation mentioned, would call for a urethra No. 36, French. You will remember what I have said before, that the urethra is more likely to over-measure than to under-measure in this proportion, and so I find in this case that the urethra, for a distance of two inches at the bulbo-membranous portion, measures forty. Forward of this we find a little contraction, being due to folds into which the mucous membrane is thrown at the pendulous portion of the canal. These folds and the apparent contraction disappear when the penis is erect, as I had the opportunity of demonstrating once at Bellevue Hospital, the patient having an erection during my examination.

Making very gentle traction on the urethrometer, we find it coming along at 40, 37, 36, 35, 34, and finally, for a distance of about three-fourths of an inch, it comes down to 30, being at that point, back of the meatus, contracted about five millimetres below the normal proportion. This case also, then, goes to show that a definite relation between the size of the penis and its canal does exist. Since the patient is not prepared to have an operation done to-day, at a future time we will divide this stricture in the anterior portion of his urethra, and see if it will not relieve him of the symptoms from which he is suffering.

While upon the subject of reflex irritation I will take occasion to relate a case which I expect to see immediately after the clinic. Some seven years ago I was called to see a patient who was making his water every few minutes, and I found evidence in the chamber of the existence of acute cystitis. The urine passed in exceedingly small quantities, and for some hours he had been unable to urinate at all. There was a history of stricture, for which he had been treated, more or less, during a number of years. He had had gonorrhœa, and was under the impression that he had a close stricture. It must have been seven years ago, for I introduced Voillermier's divulsor, a kind of instrument which I have not used since, at least as many years back as that. I was about to divulse the urethra, supposing, of course, that it was contracted, when, to my utter surprise, the instrument passed on into the bladder without the least resistance. I remarked to my assistant that I did not believe the case was one of stricture of an organic nature, but probably of a reflex origin. The patient recovered from his trouble, and had no return of it until about three years ago, when he sent for me, and I found that, although there was not complete retention, he had to make his urine very frequently and in a very small stream. There was a contraction at the orifice of about five millimetres, which I divided and then passed an instrument, full size, No. 35, into the bladder, without the least difficulty. He was directed to pass an instrument once in a while, which he did, and remained perfectly free from his trouble until recently. Two days ago he came to my office, saying that he suffered from great frequency of urination, passing a small stream, and from symptoms of cystitis. Pus was present in the urine. I attempted to pass an instrument into his bladder, but it was resisted at the bulbo-membranous junction. Having held it a few moments to see if it would not pass, and finding it did not, I desisted from further attempts through fear of starting up too much irritation, and directed the patient to return and again I would examine for stone under the influence of ether. But that afternoon I saw him again, and he was able to pass his water in larger quantity and not oftener than once in three hours, and during the night he had to micturate but three times. At ten o'clock the next morning, however, frequency of urination came on again, apparently without cause. In the afternoon, yesterday, I divided a stricture of five millimetres, after which I passed a sound, No. 30, easily into the bladder. Dr.

Bangs has seen the patient since, and he was perfectly comfortable, passing his urine only once in three or four hours. His symptoms, therefore, must be referred to the large stricture, and their relief, in one instance, simply to passing a sound, and in the last case to division of the stricture.

Now, if the two cases which I have related stood alone, we should still have reason for taking into consideration the existence of stricture near the orifice when trying to account for the existence of the symptoms mentioned, but I could show the record of at least a hundred cases in which these symptoms were produced by reflex irritation, set up from contraction at or near the meatus urinarius.

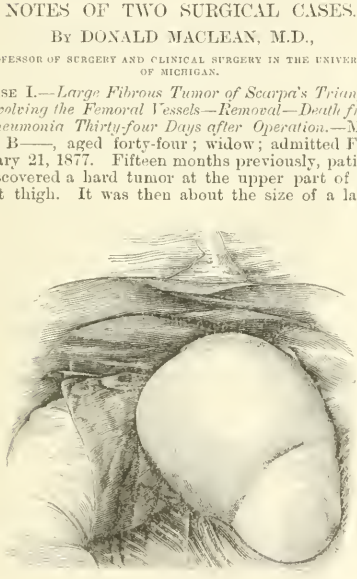
Original Communications.

NOTES OF TWO SURGICAL CASES.

By DONALD MACLEAN, M.D.,

PROFESSOR OF SURGERY AND CLINICAL SURGERY IN THE UNIVERSITY OF MICHIGAN.

CASE I.—*Large Fibrous Tumor of Scarpa's Triangle, Involving the Femoral Vessels—Removal—Death from Pneumonia Thirty-four Days after Operation.*—Mrs. A. B——, aged forty-four; widow; admitted February 21, 1877. Fifteen months previously, patient discovered a hard tumor at the upper part of the left thigh. It was then about the size of a large



orange, and was somewhat painful, especially during menstruation, which had continued to be regular. For three months the pain had been much more severe, and the tumor had increased rapidly in size. The pain is now continuous day and night, and resembles the sensation of "hot knives." Until three months ago patient had been able to walk, so that nothing peculiar was noticeable, but since that time had been unable to do so without assistance.

The movements of the different articulations of the limb are unimpaired. Patient has been subject to occasional attacks of sick headache, also to leucorrhœa; otherwise has been healthy. The spring before the tumor appeared in the thigh, patient injured her left hip slightly by a fall, and suffered more or less pain in it all that summer.

On admission, patient was somewhat anæmic in appearance, and complained of a feeling of debility, with mental depression. The tumor now measured thirty-five and one-half inches at its base. It extended from Poupart's ligament to within four inches of the knee, and occupied the whole of the inner and anterior surfaces of the thigh. The limb at the most prominent part of the tumor, measured thirty-five and one-half inches; the opposite one, twenty-two inches. The skin over the growth presented the natural appearance. On careful manipulation, the tumor was found to be quite solid. It seemed to be somewhat intimately attached at Poupart's ligament, but elsewhere it was evidently unattached, either to the skin over it or to the bone and deep textures underneath it.

The dimensions and relations of the tumor are very well shown in the woodcut, which was copied from a photograph taken before the operation.

The most important problem to solve, before determining as to the proper course to pursue, was the relation of the tumor to the great femoral vessels. The most careful examination failed to give the desired information. The vessels certainly *did not lie over* the tumor. Whether they passed through it, or were beneath and behind it, I was not able to determine before operation. Of course I hoped that they did not pass through it. I had, however, observed that the venous circulation at the back of the thigh and hip was vastly increased. Large veins coiled up over those parts, and led to the belief that, in one way or other, the natural circulation was greatly impeded, and, in consequence, the collateral circulation was proportionately increased.

I therefore determined to excise the tumor, taking care, if the vessels were found behind it, to avoid wounding them, but I also determined, in the event of their being found passing through it, to either dissect them out of their bed in the tumor and save them, or, if that were found impossible, to cut them away, trusting to the greatly increased collateral circulation to maintain the nutrition of the limb. The great solidity of the new growth led me to hope that if the vessels did pass through it they would be so diminished in size as to be practically of little consequence.

The enlarged collateral circulation which was clearly visible, gave reasonable countenance to this hope.

The patient was kept in hospital for a week before the operation was performed, during which time she took

℞. Ferri et quiniæ cit..... ʒ j.
Tinct. calumb..... ʒ iij.
Sig.—One teaspoonful three times a day.

She also took an anodyne at bedtime, consisting of twelve grains each of bromide and Dover's powder. On February 7, 1877, in the presence of the whole medical class and with the assistance of my colleague, Professor Frothingham, I excised the tumor, the patient being under the influence of chloroform, Esmarch's bandage was applied from the toes up.

On dividing the skin and fascia, I found the sartorius muscle spread out over the surface of the tumor, constituting a thick muscular covering for it.

I laid the whole mass bare with one long incision, extending from Poupart's ligament almost to the inner condyle of the femur. I then commenced to separate the tumor from its deep attachments, and at once divided the femoral vessels close to Pou-

part's ligament, where they passed right into the mass of the tumor. The vessels were instantly ligatured with strong silk threads. The tumor was then rapidly turned out of its bed from above downward, and the femoral vessels again divided and ligatured at the lower end of the tumor close to Hunter's canal. Other vessels were found and tied, so that, in all, eighteen ligatures were used. The walls of the vast chasm were drawn accurately together with deep silk sutures; the whole limb was enveloped in sheet wadding and supported by a flannel roller, and the patient placed in bed.

The following notes of the case are condensed from the hospital case-book, and were written by the house surgeon, the late Dr. Curry:

February 7th, 1 P.M.—Patient rallied well; complains of pain; pulse, 120; temperature, 104°. Administered hypodermic injection, morphia, gr. ¼. 7 P.M.—No pain; temperature of limb natural; patient has slept for two hours, and has taken a little oyster soup and ʒ ij. brandy. 10 P.M.—Pulse, 114, full and soft; temperature, 102°; expression of countenance good; feels very well.

February 8th, 6 A.M.—Has slept more than half of the time since last note. Pulse, 100; temperature, 102°. 10.30 A.M.—Pulse, 100; temperature, 103°. Catheter passed and one quart of urine drawn off. Very little pain; limb warm. Patient has taken more nourishment; countenance and spirits good, stomach still irritable from the anæsthetic. 2 P.M.—Pulse, 112; temperature, 103°; respiration, 30. Soon after the note at 10.30, patient presented more severe symptoms of shock than at any time since the operation. A hypodermic injection of ½ gr. morphia was administered, since which patient has felt better, has rested a good deal, and has taken ʒ viii. iced milk, and retained it. 9 P.M.—Pulse, 110; temperature, 102°. Gave a turpentine enema, which moved the bowels slightly, and brought away a great quantity of flatus.

February 9th, 1 P.M.—Pulse, 120; temperature, 102⅘°. 2 P.M.—Pulse, 128; temperature, 103°. 9 P.M.—Pulse, 116; temperature, 102°. Resting quietly. Slight arterial hemorrhage, which stopped spontaneously. Morphine, ¼ gr., hypodermically; catheter still required.

February 11th.—Eating and sleeping well. Pulse, 100; temperature, 102°. Wound discharging freely; two ligatures withdrawn.

February 12th.—Patient slept well last night, having taken morphia, gr. ¼, hypodermically. Pulse, 99; temperature, 102°. Wound healing rapidly.

February 13th.—Pulse, 100; temperature, 101°. Slept well all night, appetite good, eight ligatures removed; feels well.

February 14th.—Pulse, 110; temperature, 101°. Doing well.

February 15th.—Pulse, 108; temperature, 101°. Continues to do well to all appearance.

The reports continue about the same till the 18th, when the pulse went up to 120, and the temperature to 104°, and suppuration was detected in the knee-joint, and was evacuated by free incision, after which pulse and temperature gradually subsided, so that on February 22d, at 6 A.M., the temperature was 99° and the pulse 106.

The last of the ligatures, viz., those closing the femoral vessels at Poupart's ligament, came away on March 6th, just one month after operation. Pulse was then 100 and temperature 100°. The wound had opened up again to some extent, after having been almost completely healed. Nourishing diet and stimulants were freely administered, but she continued to complain of weakness; symptoms of pneumonia appeared March 10th, and increased in severity, she gradually grew weaker till the 14th, when she sank, exhausted, thirty-four days after the operation.

Note.—The length of time this patient lived, and the whole history subsequent to the operation, demonstrates conclusively that the views regarding the condition of the circulation, on which the operation was based, were correct. Death resulted from accidental causes, such as are liable to occur after any common operation.

The patient was by no means a good subject for operation. She was from the first anæmic, debilitated, apprehensive, and despondent, and when the dangerous complication of pneumonia arose, her chances were greatly lessened by the fact that Dr. Curry, who had up to that time given her the most enthusiastic care, was known to be dying from an acute and painful disease.

The important practical suggestions so clearly taught by this unique case, have always seemed to me to demand its being placed on record, notwithstanding that it involves the publication of a fatal case.

Here, if ever, it might be said that "although the patient died, *the operation was successful.*"

Case II.—*Traumatic Aneurism of the Common Femoral Artery.—Ligature of the External Iliac Artery—Recovery.*—R. T——, aged fourteen years, Allegan, Mich. On April 2, 1881, patient, while playing with a companion, was shot in the upper part of the right thigh by a pistol bullet, the weapon being in the hand of his friend. The accident was attended with hemorrhage so profuse as to induce fainting.

Pressure applied by the thumb of a bystander effectually and permanently arrested the bleeding. The external wound healed rapidly. The bullet has never been extracted. In the latter part of June, 1881, patient was brought by his father to the University Hospital. An aneurism as large as a hen's egg was found at the seat of the injury.

The wound was completely healed, but there was a distinct scar at the point of entrance of the bullet. This scar was situated just one and one-half inch from Poupart's ligament.

The tumor pulsated very strongly and presented all the characteristics of aneurism, and there seemed no reasonable doubt that the vessel affected was the *common* femoral artery.

The patient complained a good deal of pain, he was somewhat emaciated, and was unable to use his limb either in walking or standing. On inquiry it was ascertained that pressure by flexion, as well as digital and instrumental, had been very thoroughly tried by his medical attendant, Dr. Amsden, of Allegan, but without any beneficial effect.

In view of the patient's low state of health, as well as the great heat of the weather, I advised him to return to his home in the meantime, and to apply a soft rubber bandage from the toes up, with a graduated compress over the aneurismal swelling.

He was also assured that in the event of his returning in the autumn still unrelieved a radical operation would be performed.

On October 4th he reappeared at the hospital and the most careful examination failed to detect any material improvement in the aneurism, although his general health was decidedly better than on the occasion of his former visit. After careful reflection

I determined to resort to the Hunterian operation, and to place a ligature upon the external iliac artery. Had there been a reasonable hope of the wound being in the superficial femoral one or two inches below the profunda I should have preferred the old operation as applied by Syme to cases of traumatic aneurism, or had the external wound been unhealed or in any danger of opening up again I should have felt compelled to cut into the aneurismal sac and treat the case as one of a wounded artery, applying a proximal adistal and ligature to the affected vessel.

As it was, the situation of the scar excluded all hope of the superficial femoral being the wounded vessel, in the next place the external parts were as perfectly healed as if they had never been divided.

The aneurism was comparatively small and well defined, and therefore, although in reality a false aneurism, caused by an external wound, it had come to correspond very closely to a true aneurism, at least in so far as the question of treatment was concerned, and therefore the Hunterian operation seemed the best, and indeed the only alternative.

October 10th.—The patient being under the influence of chloroform, the operation of tying the external iliac was performed before the class. No difficulty was encountered, and the patient was only a few minutes on the table. My colleagues, Professors C. L. Ford, W. J. Herdman, and Dr. T. J. Sullivan, were present. The ligature used was of catgut, prepared by Young, of Edinburgh. It was cut off close to the knot. Pulsation in the aneurism ceased instantaneously, and has never returned. The limb was at once enveloped in sheet wadding, and a soft rubber bandage was applied. The further history of the case is summed up in the following notes from the hospital case-book:

October 10th.—3 P.M.: Pulse, 130; temperature, 101½. 7.30 P.M.: Pulse, 120; temperature, 101.

October 11th.—7. A.M.: Pulse, 140; temperatur, 104½°. 9 A.M.: Pulse, 142; temperature, 105°. 1.20 P.M.: Pulse, 140; temperature, 104½°. 9 P.M.: Pulse, 140; temperature, 102½°.

October 12th.—7 A.M.: Pulse, 116; temperature, 101¾. Ordered quiniæ sulph., gr. x., ter in die.; also acid. salicylici, gr. x., ter in die. 3.30 P.M.: Pulse, 100; temperature, 101½. 7 P.M.: Pulse, 112; temporature, 103°. Ordered hypodermic injection morph. gr. ¼.

October 13th.—7.30 A.M.: Pulse, 100; temperature, 101. 4 P.M.: Pulse, 102; temperature, 102°.

Bowels moved naturally. One suture removed, giving vent to a little pus.

October 14th.—Pulse, 106; temperature, 102½°.
October 15th.—Pulse, 82; temperature, 100½.
October 16th.—Pulse, 81; temperature, 99½°.
October 17th.—Pulse, 92; temperature, 99½.
October 18th.—Pulse, 90; temperature, 99½°.
October 19th.—Pulse, 82; temperature, 100°.
October 20th.—Pulse, 90; temperature, 99°.
October 21st.—Pulse, 95; temperature, 99½°.
October 25th.—Pulse, 78; temperature, 98½°.

Slight discharge of healthy pus from surface of wound. Patient dressed and sitting up in chair.

October 31st.—Pulse, 75; temperature, 98½.

Wound completely healed; aneurismal swelling much diminished; no pulsation, and no bruit. Patient walking about the ward, and permission given to go home at any time.

REPORT OF CASES OF PHTHISIS

TREATED DURING 1880-1881.

BY W. H. GEDDINGS, M.D.,

AIKEN, S. C.

(Continued from THE MEDICAL RECORD, November 15, 1879, October 30 and November 6, 1880, and January 7, 1882.)

CASE LXXXVII.—A young lady, twenty-eight years of age, from New York, both of whose maternal grandparents died of phthisis. Began to cough in July, and in September had an attack of pleuritis. Expectoration has been occasionally tinged.

December 11th.—Pulse, 88; temperature, 99.8°. Very anæmic, with the peculiar sallow color so often seen in phthisical patients. Cough troublesome, with about four ounces of expectoration, all of which floats. Left side dull in front from first to fourth ribs. Behind the dulness extends as low as the angle of the scapula, and also occupies the corresponding interscapular space. Moist râles (crackling) audible over the greater portion of the lung. Complains of pleuritic pains at the base of the lung, the result of a cold taken during the journey south. There was no marked change in the physical symptoms during the winter, but her general health deteriorated, so that when she started for home, her condition was worse than at the time of her arrival.

Result.—Steady decline.

CASE LXXXVIII.—Telegraph operator, twenty-eight years of age. Dr. James C. Wilson, of Philadelphia. No hereditary tendency to phthisis. Disease began with an attack of croupous pneumonia in January, 1877; persistent cough since July of that year.

December 11th.—Pulse, 110; temperature, 100°; weight, 120 pounds. Fair complexion and slender figure. Fair appetite and good digestion. Cough moderate, with two ounces of muco-purulent sputa, all of which floats. Dulness over right front to third rib, with diminished resonance to sixth. Respiration bronchial, with prolonged expirium. Posteriorly, no dulness, but feeble respiratory murmur.

April 14th.—Improved at first, but, having no means of support, was obliged to accept a position in the telegraph office, where the confinement soon caused an aggravation in his symptoms. His pulse is now 114, his temperature 99.2°, and his weight has declined to 118 pounds. In addition to the symptoms, as given above, there is now an area of dulness, with bronchial breathing, over two-thirds of the scapula and interscapular space.

Result.—Extension of the disease.

CASE LXXXIX.—A widowed lady, sixty-four years of age, whose husband and sister have died of consumption. Dr. Allyn P. Smith, of Baltimore. Disease began with bronchial catarrh in June, 1880; had vesperal fever and lost twenty-six pounds. Has improved since her arrival in Aiken a month ago.

December 16th.—Pulse, 104; temperature, 100.2°. Is quite pale, and cannot lie on the left side or on the back without coughing. On the left side there is an area of dulness extending from above the clavicle to the sixth rib. Posteriorly there is also dulness under the scapula. Respiration bronchial, with prolonged expirium. This patient improved a little in general health, but without any marked change in the physical symptoms.

CASE XC.—Male, single. Patient of Dr. D. E. Kissein, of Brooklyn. No hereditary predisposition. Slight hæmoptysis in June, with a series of profuse hemorrhages in September. Has had cough

since July, with occasional night-sweats. Of late, has had hemorrhages almost every other day.

December 26th.—Pulse, 96; temperature, 98.5°; weight, 124½ pounds. Presents a very anæmic appearance. Dull on the right side from the clavicle to the third rib in front, and over the upper portion of the scapula behind. Respiration feeble, with occasional ronchi; conducted heart-sounds very distinct.

January 15th.—The hemorrhages, which were so frequent at home, have not recurred during the last three weeks. General appearance improved.

February 3d.—Had two slight hemorrhages in January, but has continued to improve. Pulse, 76; temperature, 98.5°; has a healthier color and is much stronger.

April 18th.—Pulse, 100; temperature, 98.3°; weight, 135 pounds, which is a gain of 8¼ pounds. Coughs only five or six times a day. No return of the hemorrhages during the past five weeks. Right side dull from the clavicle to the second rib in front, and over suprascapular region behind. Respiration bronchial in front, feeble behind, with occasional moist râles.

Result.—Improvement in general health, decrease in the area of dulness, and a gain of 8½ pounds.

Case XCI.—A middle-aged physician from New York.

December 28th.—Temperature not exactly noted, but a little above the normal. Previous history not stated. Dull over left front, from the clavicle to the fifth rib, and also at the base of the lung. Respiration bronchial. Posteriorly there is dulness over the lower half of the scapula.

April 3d.—Temperature, 98.5°; grew worse at first, and then improved. In front the dulness has receded to the third rib; behind, remains unchanged; respiration bronchial, and in one place amphoric, with occasional moist râles; weight not noted.

Result.—Slight improvement in general health, and some lessening in the extent of the infiltration.

Case XCII.—A young medical student, nineteen years of age, a patient of Dr. A. G. Reed, of Philadelphia. No phthisis in the family. Cough began in March, and lasted two months; recurred in June, and continued to September. Visited Mexico, with negative results.

December 31st.—Pulse, 78; temperature, 98°; weight, 125 pounds. Figure slender, with sallow complexion. Good appetite, with fair digestion. Right side, dulness over supraclavicular, clavicular, and infraclavicular regions, with diminished resonance to fourth rib. Behind, diminished resonance over the scapular region.

March 27th.—Pulse, 84; temperature, 98°. Has passed through the winter without any return of cough, and has increased 6 pounds in weight. In front there is now no dulness, and the area of diminished resonance has receded to the second rib; the suprascapular region has become resonant.

Result.—Complete arrest of the disease, with a gain of 6 pounds in weight.

Case XCIII.—A Catholic priest, from Maryland, aged forty-three years. Had pulmonary phthisis when twenty-seven; recovered, and remained well until the autumn of 1880, when he had what was supposed to be malarial fever, but which eventually proved to be a return of the old disease.

January 3d.—Pulse, 90; temperature, 99°. Has gained 2½ pounds since his arrival in Aiken, and now weighs 116½ pounds; cachectic appearance; expectorates half a teacupful in twenty-four hours. Right apex dull in front to second rib, and behind to within an inch of the angle of the scapula, also in the axillary region. Respiration bronchial, with prolonged expirium, especially over the back.

February 13th.—Pulse, 104, but is usually only 81; weight, 124 pounds, a gain of 10 pounds. The area of dulness behind has become more resonant.

April 22d.—Did well until the latter half of March, at which time he had an acute attack of gastro-duodenal catarrh with fever, which reduced him considerably. At present his pulse is 88, his temperature, 98.7, and his weight, 118 pounds. Is much stronger, and has a better color. Coughs only a few times in the morning and evening, bringing up a few pellets of mucus.

Result.—Improvement in the general and local symptoms, great diminution in the frequency of the cough and in the quantity of expectoration, and a gain of 10 pounds in weight, of which he subsequently lost 6 pounds.

Case XCIV.—Male, single. Dr. Carey of Ruthertfurd, N. J. Grandfather on mother's side died of consumption. Had an attack of hæmoptysis in September, 1880, and since then has had two profuse hemorrhages. Has lost 7 pounds, and has had night-sweats.

January 9th.—Pulse, 100; temperature, 99.5°; slender figure, with fair complexion; finger-nails clawed; weight, 133 pounds; cough moderate, with one drachm of muco-purulent expectoration. Good appetite and fair digestion. Right side dull from above the clavicle to the third rib, and over suprascapular region. Respiration feeble, with prolonged expirium; conducted heart-sounds quite distinct.

To April 21st.—Improved during the first two months of his residence, gaining 5 pounds. During the month of March he had several hemorrhages, and has since then gradually lost ground. Pulse, 104; temperature, 97.5°; weight, 131½ pounds. Cough still moderate, but the amount of expectoration has increased. Slight extension of the area of dulness behind. Respiration has become bronchial.

Result.—Improvement at first, followed by relapse and extension of the disease.

Case XCV.—A young married lady—my own case. Family consumptive. Four weeks she has had cough, with severe pleuritic pains on the right side. Has had more or less fever, with some perspiration at night.

January 11th.—Pulse, 104; temperature, 99°. Pale and quite delicate in appearance. Diminished resonance over the upper portion of the right lung in front, with dulness over scapular and interscapular spaces. Respiration bronchial, with prolonged expirium.

April 6th.—Is greatly improved, and has been able to resume her rather arduous duties of housekeeper of a large boarding-house. Still coughs a little. Can detect no dulness in front, but it is still apparent over the suprascapular and corresponding interscapular regions.

Result.—Great improvement in general health and diminution in the extent of the infiltration.

Case XCVI.—A married lady, aged thirty-four. Dr. Lusk, of New York. Her grandfather and grandmother, as well as several brothers and sisters, have died of phthisis. Disease began with bronchial catarrh in February, 1875. She visited Algiers and made a partial recovery. Has lost 19 pounds. Has had one very slight hemorrhage.

January 13th.—Pulse, 96; temperature, 99°; weight, 117 pounds. Slender figure and brunette in color.

The appetite is poor, but the digestion is fair. Has slight night-sweats. Cough troublesome, with about two ounces of mucopurulent expectoration. Walks one mile without fatigue. On the right side there is diminished resonance above the clavicle, with pronounced dulness thence to third rib. Behind, the area of dulness occupies the suprascapular region, and extends two inches below the spine of the scapula, as well as over the corresponding interscapular space. The respiratory murmur is feeble, with prolonged expirium. Over the left side no dulness, but harsh respiration, with prolongation of the expiratory murmur. Conducted heart-sounds audible.

April 23d.—Pulse, 80; temperature, 98°; weight, 124 pounds, which is her normal weight. Has had no cough for several weeks past, and walks three miles without becoming fatigued. Her color is fresh and ruddy, and her appearance is that of a person in perfect health. In front the dulness has receded to the second rib, while behind there is no dulness except over a limited space above the spine of the scapula. Respiration affords no indication of disease other than prolongation of the expiratory murmur in front.

Case XCVII.—Male, aged seventy-three. Dr. O. F. Rogers, of Dorchester, Mass. No hereditary tendency to pulmonary disease. Began to cough in October, 1880, and in December it was discovered that the left apex was affected.

January 14th.—Pulse, 88; temperature, 98.9°; weight, 135 pounds. Sallow complexion, is quite weak, and suffers with dyspnœa upon the slightest exertion. Cough is moderate, with one ounce of mucopurulent expectoration. Is somewhat hoarse, and articulates with difficulty. Extensive infiltration of the upper portion of the left lung, as evidenced by dulness on percussion and bronchial respiration This patient gradually lost ground, and died March 18th.

Case XCVIII.—Married lady, aged forty. Dr. L. Pilcher, of Brooklyn. Her father, father's sister, mother's sister, and former husband, all died of phthisis.

Disease began in January, 1880, with bronchial catarrh. Visited the White Mountains without deriving any benefit from the trip. Has lost five pounds in flesh.

January 21st.—Pulse, 100; temperature, 99°; weight, 121¼ pounds. Expectorates one ounce of mucopurulent matter. *Right side*, dulness from the clavicle to the third rib, and behind over the lower two-thirds of the scapula, with bronchial respiration. *Left side*, dull to third, with diminished resonance to fourth, also over the suprascapular region. Respiration bronchial, with crackling.

May 4th.—Pulse, 92; temperature, 99.4°; weight, 125 pounds, a gain of 3¾ pounds. Improved steadily after her arrival, the temperature declining to 98°, and the cough diminishing in frequency. In April, after over-exertion and imprudence, she had a slight relapse, which lasted about three weeks. Since then she has again improved, and now looks remarkably well. On the right side the dulness is now confined to the outer third of the clavicular region, with diminished resonance to the second rib. No trace of it behind. Respiration on that side a little harsh. On the left, in front, the dulness has receded to the second rib, with disappearance of the area of diminished resonance which had been noted lower down. There is still dulness over the suprascapular region, and the respiration remains bronchial.

Result.—Remarkable improvement, with lessening in the extent of the infiltration in both lungs.

Case XCIX.—Male, twenty-five years of age. Dr. Hayes, of Great Falls, N. H. Mother had hemorrhages, and was considered consumptive, but recovered. Disease began in August, 1878, with an attack of hæmoptysis. Has had fourteen hemorrhages, twelve of which were very profuse. Visited Minnesota, where he improved at first, but subsequently grew worse. Also went into the Adirondacks, with the same results, and had six severe hemorrhages while there. Has also had night-sweats.

February 3d.— Pulse, 92; temperature, 98.9°; weight, 146 pounds. Is tall and slender. The finger-nails are bent over in the manner peculiar to consumptives. Has cough, and expectorates one and one-half ounce. The only physical signs of pulmonary disease are diminished resonance over the right interscapular space, with bronchial breathing in front, and feeble respiratory murmur behind.

April 22d.—Pulse, 88; temperature 98.3°; weight, 145 pounds. Has had no return of the bleeding since his arrival in Aiken. Is much stronger, and can now walk three miles without being fatigued. The chest-walls are everywhere resonant, and, with the exception of the bronchial breathing and feebleness of respiration, there is no physical evidence of disease.

Result.—Improvement.

Case C.—Male, thirty-three years of age; patient of Dr. A. Y. P. Garnett, of Washington. Disease began with cough, in the summer of 1877, and a hemorrhage in the following December. Came to Aiken, lost his cough, and when he left had quite recovered, having gained twelve pounds during his stay. Went to Atlanta, where he gained three pounds additional. During the following summer he visited the Greenbrier White Sulphur Springs, where an injudicious cold bath caused a relapse. Passed the next winter at Thomasville, Ga., but failed to derive any benefit, the disease remaining stationary. He went to Colorado the following September, but suffered so much from the effect of the altitude that he concluded to return to Aiken, and again improved. This winter he determined to give Florida a trial, and during the first weeks of his stay there did well, but afterward had a succession of hemorrhages, which induced him to return to Aiken. These continued to recur for a few days after his arrival, but then ceased, and, with the exception of one slight attack, did not return during the remainder of his stay. Owing to the constantly recurring bleeding, no examination could be made during the first week of his residence here; and later, when it did become practicable, I accidentally omitted to record the result. At the close, however, of his last visit to Aiken, there was disease of both lungs. At the final examination, made March 21st, his pulse was 96, and his temperature 98°. His color was good, and his general appearance that of one in fair health. There were unmistakable evidences of disease in the left lung, but on the right side the only symptom indicative of pulmonary lesion was a little bronchial respiration over the lower portion of the lung.

Result.—Improvement.

Case CI.—Male, twenty-one years of age; patient of Dr. Heaton, of Detroit, Mich. His grandfather, two grandaunts, and father died of consumption, while his mother (Case XCVIII.) is now under treatment for that disease. While serving as a clerk in a damp hardware store, in February, 1880, he contracted a cough, which disappeared the following

August, but returned with the advent of cold weather, and has continued ever since. Two weeks ago vesperal fever set in, with sweats. He emaciated to the extent of eighteen pounds.

February 12th.—Pulse, 88; temperature, 99°; weight, 110 pounds. Figure slender; poorly developed thorax. Cachectic in appearance, and quite feeble. There is dulness on the right side, over the supraclavicular and clavicular regions; also over the interscapular spaces, with diminished resonance below the spine of the scapula. Bronchial respiration in front, and feeble respiratory murmur behind.

May 6th.—Pulse, 106; temperature, 105°. Patient's progress has been retarded by a miserable stomach and the persistence of vesperal fever. Notwithstanding these unfavorable symptoms, he is stronger, coughs less, and has increased in weight. Physical signs unchanged.

Result.—Improvement, with a gain of 3½ pounds.

Case CII.—Female, twenty-nine years of age. Dr. J. C. Mullhol, of St. Louis. One paternal aunt and a brother died of phthisis. Loss of flesh for several years, with cough since the autumn of 1879. Visited the Adirondacks and improved there.

December 9th.—Pulse, 108; temperature, 99°; weight, 120½ pounds, 5½ pounds of which she has gained since her arrival in Aiken. Cough moderate, with one and one-half ounce of expectoration. Has a good appetite and fair digestion, and walks half a mile without fatigue. *Left lung* dull from clavicle to third rib, and over suprascapular space. Respiratory murmur feeble.

May 10th.—This patient improved steadily, her weight in January being 125 pounds, a total gain of 10½ pounds. She, however, unfortunately located herself in the country, where it was impossible to furnish her with proper food. In February she commenced growing worse, and gradually lost all she had gained. Her weight is now 113½ pounds, pulse 104, and temperature 101.5°. Cough moderate, with one-ounce expectoration. Physical symptoms unchanged.

Result.—Improvement at first, with subsequent relapse.

Case CIII.—Male, forty-two years of age. Dr. A. H. Nichols, of Boston, Mass. No inherited tendeney. Disease began with bronchial catarrh in March, 1880. Had fever and night-sweats, and lost 10 pounds.

February 17th.—Pulse, 100; temperature, 99.6°; weight, 143 pounds. Color good and figure slender. Cough not frequent, but expectorates half a teacupful in twenty-four hours. Has night-sweats. On the left side dulness from the clavicle to fourth rib over the suprascapula and two-thirds of the scapular region, and to a corresponding extent over the interscapular space. Respiration cavernous over the upper portion of the lung, and bronchial below. Bronchial behind, also over the axillary region.

April 20th.—Pulse, 96; temperature, 99.5°; weight, 147 pounds—a gain of 12 pounds. Physical signs unchanged in front, but behind the dulness is now confined to the region above the spine of the scapula.

Result.—Improvement, with elimination of the area of infiltration, and a gain of 4 pounds.

Case CIV.—A young lady, twenty-two years of age, from Providence, R. I. Great grandmother, grandfather, and several grandaunts and uncles on the maternal side have died of phthisis. She has had two slight hemorrhages, and has lost 23 pounds.

February 28th.—Pulse, 104; temperature, 100.8, but is much higher in the evening. Skin pale, with bright red spots on the cheeks. Is very weak, the slightest exertion causing fatigue and faintness. Right side, dulness in front from the clavicle to third rib, with bronchial respiration. Condition of the posterior portion of the lung not noted. This patient improved for a few weeks, and then declined rapidly. At the time of her departure there were evidences of the extension of the disease, with softening of the right apex.

Case CV.—Male, thirty-four years of age. Dr. Ruggin Buckler, of Baltimore, Md. No hereditary predisposition to consumption. Disease began with a slight hemorrhage in February, 1880. Has had several since then, and has lost 4 pounds. Came to Aiken in November, grew better and went to Gainesville, Fla., where he improved at first, but subsequently lost ground.

March 3d.—Pulse, 68; temperature, 97.5°; pale, with slender figure; weight, 147½ pounds; appetite poor, but with good digestion. Has cough, and expectorates one-half ounce of mucopurulent matter. Can walk two miles without feeling fatigued. On the right side, dulness from the clavicle to the third rib and over the suprascapular region; also over the axillary region. Auscultation affords no evidence of disease other than occasional ronchi, except over the interscapular space, where it is distinctly bronchial.

April 5th.—With the exception of slight hæmoptysis, a few days after his arrival, he has steadily improved. Pulse, 72; temperature, 98.5°; weight, 155¼ pounds—a gain of 8 pounds. Appetite has improved and the digestion is good. Can now walk six miles without being tired. No change in the condition of the diseased lung in front, but behind and in the axilla the dulness is less marked. He remained a couple of weeks longer in Aiken, suffered with the heat, and lost 1¾ pound of what he had gained.

Result.—Improvement, with a gain of 6¾ pounds.

Case CVI.—A single lady, thirty-one years of age, a patient of Drs. H. M. Wilson and Christopher Johnston, of Baltimore, Md. Two maternal uncles and one aunt died of phthisis. The disease was ushered in with a hemorrhage in April, 1879. Since then she has bled twelve times, often very profusely.

March 2d.—Pulse, 120; temperature, 99.7°. Has lost 11 pounds. Color fresh and bright; does not show her emaciation. Present weight, 116 pounds. Appetite and digestion not very good. Coughs and raises about one drachm of muco-purulent matter. Right lung diseased from the clavicle to third rib. My records of the subsequent history of this case are very imperfect, but show a return of the hemorrhages, with rise of temperature and some loss of flesh.

Case CVII.—A young Swiss, twenty-four years of age. Dr. Wetzel, of New York. No history of phthisis. About a month ago began to cough; had night-sweats and lost 15 pounds.

March 9th.—Pulse, 96; temperature, 98.5°; weight, 125¾ pounds. Has cough and sweats at night. The chest is everywhere resonant, except under the middle third of the scapula on the left side, where there is distinct dulness. Respiration decidedly bronchial, with prolonged expirium over both front and back.

April 28th.—Pulse, 100; temperature, 98.5°. Patient has steadily improved. Coughs now only in the morning, after rising. The sweats have ceased, and his weight is 131½ pounds. Dulness as at the time of first examination, but the respiration is now normal.

Result.—Marked improvement, with a gain of 5¾ pounds.

Case CVIII.—An Englishman, thirty-four years of age. Dr. Z. Y. Dillenbaugh, of Cleveland, O. No history of consumption in his family, but his wife died of that disease, and he may have contracted it from her. Began to cough in the winter of 1879, and has lost 50 pounds in weight.

March 10th.—Pulse, 99; temperature, 101.5°; weight, 133¼ pounds. Slender figure, very pale, and flesh quite flabby. Has night-sweats. Coughs and expectorates half a teacupful. Right side dull from clavicula to third rib, with feeble respiration above, and bronchial over mammary region. There is also an extensive area of dulness occupying the suprascapular, scapular, and interscapular regions to the angle of that bone, as well as the supra-axillary region, with full respiratory murmur.

May 18th.—Pulse, 84; temperature, 99.2°. Is greatly improved in appearance, and has gained 8 pounds. The cough is diminished in frequency and the expectoration is reduced one-half. The night-sweats have also ceased. No change in the dulness in front, but behind it extended only to one side below the spine of the scapula, and disappeared entirely from the axillary region. The respiration has lost its bronchial character.

Result.—Marked improvement in general health, with reduction in the size of the infiltration, and a gain of 8 pounds in weight.

Case CIX.—A student, twenty-three years of age, patient of Dr. Smith White, of District of Columbia. No hereditary tendency to phthisis. Disease began with bronchial catarrh, in February, 1880, followed by fever and emaciation to the extent of 15 pounds. Visited Aiken, and while there improved and gained 8 pounds.

March 10th.—Pulse, 104; temperature, 100.2°; weight, 108 pounds. Pale and cachectic in appearance; very slender and flesh quite flabby. *Ungues aduncæ.* Cough moderate in frequency, with half an ounce of expectoration. On the *right side* there is dulness above, under, and below the clavicle, with feeble expiratory murmur. On the left side the dulness is much more extensive, reaching in front to the third rib, and behind over the suprascapular region. The respiration on that side is feeble, with prolonged expirium.

April 28th.—Pulse, 100; temperature, 100.1°; weight, 108¾ pounds. With the exception of a slight increase in weight, the condition of the patient has undergone no material change.

Case CX.—A married lady from Brooklyn, thirty-seven years of age, the name of whose physician was not noted. No heredity on either side. Had a slight hemorrhage on October 15, 1875, followed by occasional cough, which, since December, 1880, has become persistent.

March 14th.—Pulse, 100; temperature, 98.5°. No emaciation. Dulness on right side from the clavicle to third rib, and from the spine of the scapula to its angle. Respiration bronchial, with prolonged expiratory murmur.

April 30th.—Pulse, 102; temperature, 98.5°. Notwithstanding several acute catarrhal attacks, patient has improved in appearance, and has a fresher and brighter color. The cough, which had grown less frequent and with a smaller amount of expectoration, has, within a day or two, again increased in consequence of imprudent exposure to cold. The dulness in front has receded to the second rib, and behind occupies only two inches of the scapular space. Respiration harsh in front and bronchial behind.

Result.—Improvement in general and local symptoms.

Case CXI.—Male, thirty-seven years of age, the name of whose physician was not noted, from Cincinnati. Mother and sister died of consumption, and one brother has "weak lungs." Cough began in 1879, and was followed by loss of flesh. He recovered from this, but has had similar attacks every winter. In January, 1880, while returning from New Orleans, he was seized with acute pneumonia; has coughed ever since, and has lost 27 pounds.

March 15th.—Pulse, 106; temperature, 98.7°; weight, 110 pounds. Very pale and weak, suffers with dyspnœa on the slightest exertion, and presents the appearance of a very ill man. Left side dull in front from clavicle to third rib, with harsh respiration behind; dull over supraspinous fossa, with harsh respiratory murmur. *Right side* dull from the clavicle to the third rib in front, and over the suprascapular and over scapular region to the angle of the shoulder-blade. Respiration over both front and back loud and bronchial in character.

May 24th.—Pulse, 100; temperature, 98.8°. Has improved in every respect, has a fresher color, and is in excellent spirits. At the time of his arrival in Aiken, he could scarcely walk a block without fatigue, while now he walks three-fourths of a mile with ease. His weight is 118½ pounds, a gain of 8½ pounds. Has only an occasional hack throughout the day, rarely at night, his sleep being sound and uninterrupted. All evidences of disease have disappeared from the left lung, the percussion-sound being resonant, and the respiratory murmur vesicular. On the right side the dulness has also disappeared from the front, and, although still apparent behind, is confined to the suprascapular region and the corresponding interscapular space. The respiration on that side is still bronchial, with occasional moist râles.

Result.—General improvement, less cough and expectoration, increased strength, with less dyspnœa; a gain of 8 pounds, and disappearance of all signs of disease in the left lung, and diminution in the area of dulness on the other side.

Case CXII.—A young lady from New York, with hereditary predisposition to pulmonary disease on both sides, her paternal grandfather and uncle having died of phthisis. Disease began with a bronchial catarrh in March, 1880, which was followed by rapid emaciation. Has improved since her arrival in Aiken, and has already gained 10 pounds.

March 17th.—Pulse, 96; temperature, 98.6°; weighs 118 pounds. Over the left lung there is diminished resonance from the clavicle to the rib, with dulness thence downward to the base of the lung. There is also dulness over the whole back, but much more distinct toward the base. The respiration is feeble, with occasional moist râles. The dulness does not shift with change of position, nor is there any bulging of the intercostal spaces.

May 6th.—Pulse, 98; temperature, 98.8°; weight, 115½ pounds. Has a good color and is much improved in general appearance. The diminished resonance has disappeared from the upper portion of the lung in front, but there is still dulness from the fifth rib to the base of the lung. Behind there is no dulness, and the respiratory murmur is vesicular.

Result.—Great improvement in general health, with a gain of 7½ pounds and diminution in the extent of the infiltration.

Case CXIII.—Married lady, aged thirty-five. Dr. Wright, of Buffalo. Mother died of consumption. Began to cough in September, 1879; had night-sweats, and lost 23 pounds in weight.

March 31st.—Pulse, 108; temperature, 100.4°. Is very pale and cachectic in appearance; is quite weak, and moves about with great difficulty. Cough troublesome, with about four ounces of expectoration. There is dulness over the whole of the left lung, with bronchial respiration, in one place cavernous, with pectoriloquy.

May 6th.—Pulse, 116; temperature, 100.5°. The cough has been better and the expectoration less. Although improved in general health, there has been no change in the physical symptoms.

Tabular Statement of Cases of Phthisis Treated at Aiken, S. C., during the Winter, 1880–81.

Case.	Sex.	Lung affected.	Term of residence in Aiken.	Result.	Increase in weight.
LXX	M.	Right.	6 months.	Improved.	8¼ pounds.
LXXI	F.	Right.	6 months.	Arrest.	12½ pounds.
LXXII	M.	Right.	2 months.	Death.	0
LXXIII	M.	Both.	.....	Death.	0
LXXIV	M.	Right.	7 months.	Arrest.	28 pounds.
LXXV	F.	Right.	4 months.	Grew worse.	0
LXXVI	F.	Left.	5 months.	Improved.	
LXXVII	F.	Right.	5½ months.	Unchanged.	
LXXVIII	F.	Right.	5 months.	Grew worse.	0
LXXIX	F.	Right.	5 months.	Grew worse.	0
LXXX	M.	Both.	5 months.	Improved.	6 pounds.
LXXXI	M.	Both.	4 months.	Grew worse.	0
LXXXII	F.	Both.	2 months.	Death.	0
LXXXIII	M.	Right.	2 months.	Improved.	
LXXXIV	F.	Both.	3 months.	Grew worse.	0
LXXXV	M.	Right.	7 months.	Improved.	11¾ pounds.
LXXXVI	F.	Both.	4 months.	Grew worse.	0
LXXXVII	F.	Left.	3 months.	Grew worse.	0
LXXXVIII	M.	Right.	4 months.	Grew worse.	0
LXXXIX	F.	Left.	3 months.	Improved.	
XC	M.	Right.	4 months.	Improved.	8½ pounds.
XCI	M.	Left.	3½ months.	Improved.	
XCII	M.	Right.	3 months.	Arrest.	6 pounds.
XCIII	M.	Right.	5 months.	Improved.	4 pounds.
XCIV	M.	Right.	4 months.	Grew worse.	0
XCV	F.	Right.	Resident.	Improved.	
XCVI	F.	Right.	4 months.	Arrest.	7 pounds.
XCVII	M.	Left.	2 months.	Death.	0
XCVIII	F.	Both.	3½ months.	Improved.	3 pounds.
XCIX	M.	Right.	3 months.	Improved.	0
C	M.	Both.	3 seasons.	Improved.	
CI	M.	Right.	3 months.	Improved.	3½ pounds.
CII	F.	Left.	5 months.	Grew worse.	0
CIII	M.	Right.	2 months.	Improved.	4 pounds.
CIV	F.	Right.	2 months.	Grew worse.	0
CV	M.	Right.	2 months.	Improved.	6¾ pounds.
CVI	F.	Right.	2 months.	Grew worse.	0
CVII	M.	Left.	7 weeks.	Improved.	5¾ pounds.
CVIII	M.	Right.	2 months.	Improved.	8 pounds.
CIX	M.	Both.	6 weeks.	Unchanged.	¾ pound.
CX	F.	Right.	6 weeks.	Improved.	
CXI	M.	Both.	2½ months.	Improved.	8 pounds.
CXII	F.	Left.	2 months.	Improved.	7½ pounds.
CXIII	F.	Left.	6 weeks.	Unchanged.	

Summary.

		Per-centage.		Per-centage.		Per-centage.		Per-centage of three seasons.
Arrested	6	19.3	7	19.2	4	9.3	17	15.2
Improved	13	41.9	16	42.1	21	48.8	50	44.6
Unchanged	4	12.8	3	7.9	3	6.7	10	8.8
Grew worse	7	22.6	10	26.3	12	27.8	29	25.9
Died	1	3.2	2	5.1	4	9.3	7	6.2
	31		38		44		113	

In estimating the value of the above results it should be remembered that the season of 1880–81 was characterized by the most unfavorable weather ever experienced at Aiken, an unusually high temperature having been followed by the severest cold ever recorded at that station. In addition to the unfavorable meteorological conditions, there was among the invalids an unusually large number of desperate cases, many in the very last stage of the disease, and others in whom the infiltration had assumed such proportions as to preclude the possibility of any lasting improvement; such, for instance, were cases LXXI., LXXIV., LXXX., LXXXII., LXXXIV. Aiken, being the most conveniently accessible of all the Southern health resorts, naturally receives an unusually large proportion of cases, which, on account of the advanced stage of the disease and extreme weakness, physicians would not dare to subject to the fatigue of a longer journey.

Medical men have frankly stated to me that they have sent to the mountains only those patients offering fair chances of recovery, utilizing the Southern resorts as a sort of forlorn hope for the more desperate of their cases.

Notwithstanding the fact that we are compelled to accept and treat so many unfavorable cases, the results achieved at Aiken not only compare favorably with those of other celebrated resorts, but surpass most of them in the number of cases benefited. According to Herman Weber, one of the most recent authorities on this subject, 41.2 of his cases at Madeira improved, 17.6 remained unchanged, while 42.1 grew worse. On the Riviera da Ponenta his results were as follows: 47.6 improved, 11.75 remained unchanged, and 34.9 grew worse. Adding together the cases in which the disease was arrested (15.2), and those which improved, 44.6, we have 59.8 benefited or 18.6 more than at Madeira, and 12.6 more than on the Riviera.

HYDRANGEA ARBORESCENS IN RENAL CALCULUS.

By N. F. BROWN, M.D.,

DETROIT, MICH.

Having been much interested in Dr. Edson's article upon "Hydrangea in Renal Calculus," and as I have used the remedy in several cases of renal calculi, I will also report my experience.

Case I.—October, 1868, while I was located in Port Huron, I was called to visit a grocer, about thirty-eight years of age, and found him suffering severely with a sudden attack of nephritic colic. This was my first professional acquaintance with him, and he informed me that for several years past he had had occasional attacks, varying in degree, but that he had not been attended by regular physicians, and that a correct diagnosis in his case had not been made.

This attack being unusually severe, he concluded to pass by his "doctor druggist" and try some one else.

The diagnostic features here were well marked: the pain commenced in the right lumbar region, from which it diverged, and especially along the line of the ureter the pain was intense; the testicle was drawn upward almost to the ring, and the corresponding side of the scrotum contracted. The groans and shrieks, with cold perspiration and pinched features, portrayed the great suffering of the patient.

I ordered at once sulphate of morphia internally,

and fomentations to the abdomen and groin; and in two hours the pain and tenesmus were decidedly lessened; this was at 4 P.M., when he commenced taking the fluid extract of hydrangea in ʒ ss. doses every three hours, and early next morning the pain suddenly ceased, and in a few minutes he passed a large quantity of water containing pus, blood, and abundant concretions of uric acid. From this time on he improved rapidly, and in three days' time was able to be about and attend to light duties, although in this case I believe that there was inflammation of the bladder.

The result was gratifying to all parties concerned, especially to the patient; he questioned me in reference to the remedies used, asserting, in a very positive way, that no such medicine had ever been given him in previous attacks. His general health rapidly improved, and he expressed the opinion that he was a "new man."

The following spring I located in this city, and did not see the gentleman again till four years later, when I met him at a friend's house in the city, and he informed me that after I left Port Huron, in the summer, he had a severe attack; that he had my prescription duplicated, and that relief was prompt in a few hours, passing "plenty of gravel." He also informed me that he kept the remedy on hand, and occasionally took a dose, and that he had not had any more "trouble with the gravel."

CASE II.—In August, 1870, I was called late one evening to visit a young man "dying with inflammation of the bowels," so stated by the messenger who came for me.

The patient was twenty-one years of age, of good habits and industrious; he was employed as a "whip-sawyer" in one of the ship-yards of the city, and is to this day employed in the same yard and in the same capacity. Entering his room, I found him in the dorsal decubitus, with the right leg flexed upon the thigh; expression denoting great anxiety; tremor and cold perspiration; found the right testicle drawn upward, severe pain in the groin and thigh, with diffuse abdominal tenderness—the pain originating, as in Case I., in the lumbar region. This was his first attack, and when I gave him my opinion of his case, he and his friends doubted my diagnosis, and, as I was a stranger, called in the emergency, he did not take the remedies as ordered, but early in the morning sent for the family physician, who upon arrival also disagreed with my diagnosis, because the patient was somewhat relieved during the night by the use of morphia.

Being dismissed from the case, I do not know what the treatment was, but remember that the patient did not resume his work for about two weeks, and in three or four weeks after he commenced work another attack came on, and again I was called. I had informed him in the previous attack of the probable appearance of the urine when passed freely, and remembering that my conjecture was true, he was anxious that I should treat him in this second attack. The diagnostic features of the second attack were as well marked as in the first. The treatment was commenced with sulphate of morphia internally, and fomentations to the abdomen and groin. Bismuth was also given in this case, as there was considerable nausea. The fluid extract of hydrangea, in one-half drachm doses, with a few drops of tincture hyoscyami, were given every three hours, and when four or five doses were taken the urine passed freely, containing uric acid concretions in considerable quantity, with a few drops of blood.

I gave sulphate of morphia hypodermically, and chloroform by inhalation, as the suffering was as great as I ever witnessed under any circumstances. The hydrangea was given in one-half drachm doses, every two hours, and at the expiration of six hours the patient was perceptibly better, and in two hours more was completely relieved by a copious discharge of urine containing "red sand" in abundance. No blood or pus were discovered in this discharge, neither had there been any dribbling of urine, as in the previous attacks. It was astonishing how quickly he rallied from this attack. In less than a week he was at work again.

This, the last attack, occurred shortly after marriage, and whether that was an exciting factor I do not undertake to say; but I do know, from personal observation, that since that time he has enjoyed good health, and that he has had no urinary or renal trouble.

CASE III.—June, 1874. A married woman, five months advanced in pregnancy, apparently in good health, was suddenly seized with a sharp pain in the right lumbar and sacral regions, and when I saw her, in a short time after the beginning, she was suffering severely with pain and fright. As she had never experienced anything of this character before, I was guarded in my diagnosis. Her treatment at first was sulphate of morphia and bicarbonate of potash. These were given in the evening and ordered continued through the night. Calling early next morning, I found that the severe pain had changed from the back and side to the upper site of the ureter, where a slight prominence was plainly discernible, and very tender to the touch.

I then informed her that *probably* a stone was passing from the kidney through the ureter to the bladder, and subsequent events proved the correctness of that supposition. I prescribed the fluid extract of hydrangea with the potash, and gave the morphia with Dover's powder. The progress of the stone through the ureter could be traced day by day, for it took three days for its passage, and, as the stone had neared the bladder, I feared that it was permanently arrested, and that suppuration might ensue, as it remained in that position for at least fifteen hours.

I gave chloroform by inhalations; fomentations used freely, with tincture of opium.

During one of those terrible paroxysms of pain the patient shouted, "I am better now," and at once arose from the bed, sat upon the vessel, and, while the urine was flowing freely, the stone fell into the vessel with a click that was distinctly heard in the room. Blood and pus were discharged with the stone.

I secured the gravel, which was smooth and triangular in appearance. The stone was accidentally lost, and no chemical examination made of it, but it was probably phosphatic. Premature labor was threatened before the stone passed, as I could feel the contraction of the uterus under my hand; but it was averted, and in due time I delivered her of a healthy male child. Her getting up was good, and while she remained in Detroit, which was for three years after, she had no symptoms of gravel, passing through another pregnancy and delivery at the end of two years.

I am well aware that this result might have been reached without the use of the hydrangea, and I do not claim that the drug facilitated the passage of the stone through the ureter; but, afterward, she took occasional doses of the drug, which relieved her

backache, and, she believed, saved her from another severe attack. Since my first experience with hydrangea, in 1868, I have frequently prescribed it in renal and urinary disorders, and generally with very gratifying results, and would not hesitate to prescribe it in most affections of these organs, avoiding acute inflammation of the kidneys. In chronic nephritis, in the prostatic troubles of elderly gentlemen, and in hysteria with retention of the urine, I have had pleasing results with hydrangea aborescens.

Progress of Medical Science.

Administration of the Muriated Tincture of Iron.—As a harmless and tasteless mode of exhibiting the muriated tincture of iron, Dr. J. H. Grimes proposes that it be administered in Planten's capsules of jujube paste or gelatine. He directs his patients to drop into the cup of the capsule as many drops of the pure tincture as have been prescribed; the cap is then to be replaced, and the capsule swallowed in the usual way with water. His patients are much pleased with this new mode of taking the tincture, and the security offered to the teeth at once gains their ready co-operation. The question, however, arises, whether it would be wise to allow the undiluted tincture to come in contact with the mucous membrane of the stomach, as it does when administered in this manner. In some conditions it would certainly be too irritating.—*Medical and Surgical Reporter*, November 26, 1881.

Amyl Nitrite in Tinnitus Aurium.—Dr. J. Dana Littlefield (*Med. and Surg. Rep.*, November 26, 1881) states that he has used the nitrite of amyl in his own case for tinnitus aurium. He poured a small quantity of the remedy into a two drachm vial, and put on his handkerchief, for inhalation, as much as would be likely to come out from suddenly inverting the vial upon and immediately compressing the handkerchief. On inhalation, the character of the sound became modified (lighter), longer intervals of ease ensued, and, finally, a decided sense of inexpressible relief, with a feeling of positive change on the affected side. The dose (about ten minims) was followed by no discomfort or untoward symptoms, but, on the contrary, by an increased exuberance of spirits, perhaps due in part to the achievement of a happy relief. Dr. Littlefield states that he finds no authority for this therapeutic use of the nitrite of amyl, other than this one successful case. He has his own theory in regard to the action of the drug, but is awaiting reports from the profession.

Wool-Sorters' Disease.—Mr. Spear has recently published his official report, which establishes the identity of the wool-sorters' disease with anthrax. The symptomatology and anatomy of this affection are fully discussed, and certain interesting observations are advanced in regard to its pathology. The usual classification of anthrax into an "external" and "internal" form is observed throughout the report. In many instances, however, there is a wide divergence from the development and progress of typical cases. The malignant pustule may appear, not as an initial lesion, but as a local manifestation of constitutional infection, and a "minor pustule" is apt to attack the hands of those working on infectious material, a pustule very different from the typical form, but closely resembling the lesion resulting from only partially successful inoculation of anthrax virus upon carnivorous animals, and similar to that produced by Pasteur's "attenuated virus" in the herbivora. In the other variety of the disease, the anthrax fever, still more important deviations from the accepted type are described, and although the German and French observers look upon the affection as almost always fatal, Mr. Spear concludes that only a moderate number of cases terminate unfavorably. Again, while one man may be stricken down by a rapidly fatal malady, his comrade, working in the same material, may also be affected, but by a form of the disease which stops short of the severer symptoms, and ultimately goes on to recovery. The histories of long-continued malaise, also, among wool-sorters are numerous. The symptoms are much like those of the prodromal stage of acute infection—headache, depression, nausea, dimness of sight, cramps, restless sleep, with the occasional appearance of cutaneous eruptions, petechiæ, boils or herpes. At times an apparent periodicity is observed in the subjective symptoms. Such manifestations may occasionally occur as prodromata of an acute attack of the disease; more often, however, they disappear spontaneously. The author admits the possibility of a chronic anthracoid poisoning, the analogue of which may be found in malarial disease. The operation of the virus from its very inception is peculiarly inconstant. Incubation may be deferred by long periods of latency; full development may be delayed by prolonged and intermittent prodromata; often the disease aborts. At first, and for a variable time, the virus is "barely able to prolong its existence;" either the removal of unknown obstacles, however, or the addition to the blood, or secretions, of agents promoting the development of the poison, or both these contingencies, enables the infectious material to exert its full sway, and the disease to run its fatal course. To explain the unequal receptivity to the poison, Mr. Spear revives an old theory, that of the eating of more or less crude vegetables and fruit. Guided by the well-known predilection of this contagium for herbivorous animals, and by the fact that flesh-fed rats prove refractory to inoculation with anthrax virus, while the same rats fed on vegetables quickly succumb, the author was led to inquire into the alimentation of the wool-sorters who had suffered from acute attacks of anthrax fever. He found that in nearly every case in which information was obtainable, the development of urgent symptoms had supervened upon the ingestion of an unusual quantity of vegetable food in some form or other. Again, in several cases of remission of the symptoms, a relapse seemed to follow the eating of vegetable food. In Constantinople also, where the external form of the disease is well known, the eating of vegetables and fruit during an attack is regarded as "especially dangerous." The evidence appears to be strong and circumstantial so far as such evidence can be. The experiments of Feser are now very generally accepted by continental authorities as indicating that the relative immunity of the carnivora is not inherent to the genus, but is influenced by the nature of their food. The immunity of the fœtus is now regarded as dependent on the fact that it is really a carnivorous animal, not on any filtering action of the placenta. As Mr. Spear says: "It is conceivable that alimentary substances may bring about in the body such chemical or morphological changes as will render its fluids a richer field for the proliferation of disease-germs."—*British Medical Journal*, November 5, 1881.

Electro-Therapy in Opacity of the Vitreous Body.—M. Teulon, in writing upon opacities of the vitreous body, and their treatment by electro-therapy, gives the results in twenty-four cases observed by him, and treated by the continued current; he reckoned twenty-two as radically cured. He employs a very small number of elements, and applies the positive pole upon the closed eyelids, and the negative upon the mastoid process, or upon the superior cervical ganglion. The application lasts only two or three minutes. In conclusion, M. Teulon observed that in every opacity of the vitreous body, no matter what be its degree or extent, provided that its development had not assumed the confirmed form of hypertrophy, he considered, from experience, the constant continued current as the most efficacious treatment.—*Medical Press and Circular*, November 9, 1881.

Jaborandi in Croup.—Dr. W. N. Ames, having obtained gratifying results from the use of jaborandi with yerba santa and grindelia robusta, in catarrhal croup, determined to try the same treatment for every case met, to prove the remedy. On October 12th, he was called to see a girl, seven years of age, suffering with croup. Sedatives and quinine were first given, until the fever subsided; immediately after, the administration of fluid extract of jaborandi, in twenty-drop doses, every two hours, was begun. As the remedy produced nausea and vomiting, it was given by the teaspoonful in an enema, until physiological effects were produced. Quinine having removed the malarial influence, treatment with jaborandi was fairly commenced on the second day. The dyspnœa and the dry, brassy cough were superseded by almost natural breathing and moist, croupy cough. By placing the patient on her back, so that she could swallow the saliva, it was thought that the influence of the remedy would be protracted. Nausea and vomiting were relieved by appropriate means. Jaborandi was given every two hours, night and day, for nearly two weeks. A gentle salivation, with moistness of the larynx and pharynx, was kept up. Occasional collapses were experienced. Oxalate of cerium relieved catarrh of the stomach. Subsequently, pilocarpine was administered instead of the fluid extract. On the third day of treatment, a piece of membrane three inches long, tubular, and exhibiting a coat of the trachea, was detached and coughed up. Later, smaller pieces of membrane were expectorated. Dusart's lacto-phosphate of lime, with sulphur, was then administered, alternating with the jaborandi. Atomized lime-water and lactic acid inhalations were also employed. Jaborandi, according to Dr. Ames, evidently cured the disease, as it relieved the urgent symptoms after the first few doses, acted on the salivary and faucial glands, keeping the inflamed larynx and trachea bathed with their secretion, and arresting the further formation of the membrane. The syrup and the sulphur may have aided in bringing about a favorable issue.—*Medical and Surgical Reporter*, November 26, 1881.

Ovariotomy.—The November number of the *American Practitioner* contains a series of practical remarks on the subject of ovariotomy, made by Dr. Thomas Keith, in the course of an interview. This distinguished ovariotomist had observed several instances of carbolic acid-poisoning occurring in patients upon whom he had operated under antiseptic precautions, and had himself been injuriously affected by this agent. Since March he had stopped the spray altogether. Practically, he states, he has not used antiseptics since, in the proper sense of the word. Sometimes he does use very weak carbolic solutions, but not as a spray; at other times he uses water alone. He doubts very much whether the spray is of any use whatever in ovariotomy operations, and does not favor the adoption of new antiseptics, such as the eucalyptus, etc. As he has had no fatal issues to record since abandoning the spray, no basis is afforded for the comparison of death-rates with and without its use. From March to the date of the interview, twenty-six operations were performed without antiseptics—at any rate without the spray—each with happy issue. In twenty-six cases operated upon before he began antiseptics, Dr. Keith lost one patient. There was, then, one death in a total of fifty-two cases done without antiseptics. Thirteen of these patients, furthermore, were operated upon in the hospital, where they were specially liable to suffer from septic and other injurious influences. Since this interview, Dr. Yandell states, in a note, that Dr. Keith has done twelve other ovariotomies without a death. Subsequent to discarding the spray, temperatures anything like 103 were never observed; 100° was rarely passed, and ice-bags used but once. Dr. Keith now drains more cases than when he operated under antiseptics. He prefers ether to chloroform. Speaking of fibroids, he stated that the operation for their removal had become a fashion, and was performed too often; the only ones that should be removed were rapidly growing fibroids in young women. Five of his cases were done successfully without antiseptics; of four done under the spray, one died of carbolic poisoning.

Nerve Suture.—In forty-three reported cases of suturing divided nerves, Wolberg found twelve in which the restoration of function could be explained only on the hypothesis of union by first intention. The results of the experiments conducted by the author led to the following conclusions: 1. Primary union of nerves is possible. 2. The ends of a divided nerve should be sutured together in all recent cases; the operation should be undertaken in old cases only when called for by the importance of the paralyzed functions, and when all other methods of treatment have proved fruitless. 3. Direct are preferable to paraneurotic sutures, the former being not only equally free from danger and as easily executed as the latter, but also affording more accurate coaptation. (Filkenheim recommends paraneurotic sutures whenever these suffice to bring the divided ends in perfect apposition, *vide* Medical Record, Vol. xx., No. 20, p. 545). 4. Even when primary union is not obtained, the process of regeneration is hastened by suture.—*Centralblatt fuer Chirurgie*, September 24, 1881.

Hypnotism.—The *Philadelphia Medical Times* of November 19, 1881, contains a paper on "Hypnotism," read by Dr. Charles K. Mills before the Philadelphia County Medical Society. The author therein detailed his experiments made upon two subjects. Among the phenomena observed were diminution or loss of consciousness, increase in pulse and respiration, highly marked analgesia, automatism at command, tremor, contracture, and neuro-muscular hyper-excitability. The almost constant increase in the rapidity of breathing is attributed by Heidenheim to a stimulation of the respiratory centre. "The neuro-muscular hyper-excitability," says the author, "is simply a phase of exaggerated reflex excitability."

He regards the views of Heidenheim relating to the hypnotic phenomena as the most reasonable, although not altogether free from objection. According to the latter, the cause of these phenomena lies in the inhibition of the activity of the ganglion cells of the cerebral cortex, the inhibition being brought about by gentle prolonged stimulation of the sensory nerves of the face, or of the auditory or optic nerve. Dr. Mills believes that hypnotism has a limited, but legitimate, therapeutic application, and that its judicious employment would be of benefit in certain forms of neuralgia, spasm, tremor, and palsy. The hypnotic tremor, he states, may afford some indication as to the nature of some of the cases of tremor which present themselves to the physician for diagnosis and treatment. The author mentions a case of hystero-epilepsy in which one of the most striking manifestations was a persistent tremor of the upper extremity, simulating that of sclerosis of cerebral or spinal origin. It, however, disappeared with the cessation of the spasmodic attacks. A persistent tremor, he says, closely resembling that seen in grave cerebro-spinal disease, may be due to causes as temporary as those which bring about the transient conditions of hypnosis. In the discussion which followed, Dr. Blackwood stated that he considered the effect of hypnotic sleep to be injurious to the brain, and not justifiable as a therapeutic measure, especially as the trancoidal state was more readily obtained in hysterical and already weak-minded persons, who, he conceived, were more likely to be injured than benefited by such proceedings. Dr. Thomas, however, thought this condition might prove of service in hysterical paralysis; for if, during hypnotism, exercise of the parts could be made under the physician's control, they might afterward be moved by conscious volition. Dr. Woodbury remarked that, since the lecturer had called attention to the increase in tremor in the right arm of one of his hypnotized patients, he would say that the connection between tremor and paralysis was so close, that possibly hypnotism, instead of benefiting this patient, might aggravate her disease. In coarse lesions hypnotism might do damage to already weakened brain-functions, an accident which has already happened. Dr. Mills, in closing the discussion, admitted that the condition was a pathological rather than a physiological one, and that harm might be done by incautious experimentation. Grave hysteria might often be regarded as a more or less pronounced condition of hypnosis. He stated that a case of brachio-crural neuralgia had been cured by passes, and that Esdaile had performed sixty or seventy surgical operations upon hypnotized patients.

Numeration of Red Blood-Corpuscles. — Toniessen and Penzoldt have conducted a series of observations to determine the corpuscular richness of the blood in various pathological conditions, and have found that in most diseases there is a diminution below the normal average of 5,000,000 to the cubic millimetre. In one case, where peritoneal transfusion was practised with the result of apparently improving the patient's condition, no material increase in the number of corpuscles was noted, the average of several observations before transfusion being 4,450,000, as against 4,509,000 after it. In a case of pneumonia, with high fever, there was a considerable decrease in the number of red corpuscles, but baths, given to reduce the temperature, always served to bring about a favorable change; thus, with a temperature of 39.7° C., the number of corpuscles was noted to be 3,690,000, while after a bath the temperature fell to 38.9°, at the same time that the number of corpuscles rose to 4,690,000. In a certain class of cases a condition of hyperglobulosis was observed. These were all instances of congenital or acquired cardiac disease in a state of insufficient compensation. Among these were two cases of congenital stenosis of the pulmonary ostium, with a corpuscular richness of 7,500,000 and 8,820,000 respectively. Where the compensatory hypertrophy was sufficient, there was no departure from the normal standard. Moreover, in two cases with insufficient compensation, where the patient's conditions were quickly ameliorated by digitalis, there was observed a corresponding change from hyperglobulosis to the normal. From these observations, Toniessen and Penzoldt conclude that in all cases of obstructed systemic circulation, the blood in the peripheral vessels is, so to speak, concentrated. In one individual, the authors made examinations to determine the average richness in corpuscular elements of the blood on either side of the body. The case was one of well-marked atheromatous degeneration, with occasional inequality in the volumes of the radial pulses, giving rise to the suspicion of the presence of aneurism of the arch of the aorta. In this patient there was a constantly present, though varying preponderance in the number of corpuscles on the right side of the body, the difference amounting at one time to as much as two and one-half millions. The idea of aneurism was abandoned after further observation, but the authors discovered that the patient was affected with right hemiparesis, as the result of an apoplectic seizure sustained many years previously. In this case the excess of corpuscles on the right side was attributed to the same cause as that given for malcompensated cardiac disease, namely, obstructed circulation on the diseased side; in the paralyzed, or paretic parts, the venous circulation is sluggish because of insufficient muscular action, the parts often being cyanotic, perspiring more freely than the sound side, etc., circumstances which favor an increased evaporation of moisture from and a relative increase of corpuscles in the vessels of the diseased part. Lyon's experiments and observations (Virchow's *Archiv.*, vol. lxxxiv., p. 207) were principally directed to the numeration of red corpuscles in cases of traumatic anæmia. It was found that in all cases of abstraction of blood, there was a perceptible decrease in the average number of red corpuscles during and immediately after hemorrhage, whenever the latter equalled two per cent. of the weight of the animal. A continuance of the experiment induced a further decrease. During the first few days succeeding the loss of blood, the corpuscular richness sank still lower, after which there was a gradual return to the normal standard. Where the abstraction of blood amounted to 3.5 to 4.5 per cent. of the weight of the animal, a period of from nineteen to thirty-four days was required before restitution was complete; a shorter period elapsed in milder cases of anæmia. During and immediately after venesection the number of white blood-corpuscles increased but slightly, but during the following few days there was a marked absolute increase in their number, which lasted, however, only a few days, while their relative number remained greater than normal for a much longer time. Observations made in a few cases of traumatic anæmia in human beings yielded similar results, but were carried out with very great difficulty.—*Med. Chirurg. Rundschau*, September, 1881.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, January 14, 1882.

FORCED RETIREMENT FROM THE ARMY.

THE bill now pending in Congress to retire all officers on their reaching sixty-two years of age, contemplates some important changes in the present organization of our army, and is likely to improve the morale and increase the efficiency of the different corps accordingly. It is to be expected that any active opposition to its passage must come from such officers as are past the specified age. But the comparatively small number of older gentlemen who may be temporarily damaged by the order, is more than balanced by the larger number of more active workers who will fill the vacant places by closing up in the line of promotion. It must be conceded that the rate of promotion in our army is exceedingly slow. The chief reason for this is the fact that, by a mistaken delicacy on the part of Government, many of the officers whose periods of real usefulness have passed, and whose abilities for active service have ceased, are retained in position, and are thus allowed to permanently clog the advancement of younger and more efficient men. It is quite true that the number of senior officers who occupy this position is comparatively small, but their indefinite continuance in office is a permanent and effectual bar to progress along the entire line. Thus the members of the entire corps grow old together, without the usual opportunities for developing latent energies, or of satisfying the ordinary tendencies of legitimate ambition. It is by no means difficult to see how the maintenance of this system to the extent it has recently been carried in our army, must paralyze the best energies ever ready in the younger officers. Compulsory retirement at a fixed age, as contemplated in the bill under consideration, would appear to be the only feasible plan for obviating these obstacles to legitimate promotion. It is true any officer, old or young, is liable to be retired on the ground of physical unfitness for duty, but this is seldom done, save in extreme cases. Besides, there is inseparably connected with such a necessity, a feeling of more or less mortification on the part of the gentleman who is the subject of it. The proposed law will certainly have the advantage over what may be called the present custom, in that a forced retirement cannot always be directly associated with disqualification for service on account of mere physical or mental disability.

There is no doubt that some men are fit for the most active military duty at sixty-two, and even beyond that age, but such exceptions are so rare that a rule implying the contrary could safely be enforced without injury to very many.

Certainly any such services as may be performed by one of such officers can hardly be proved so indispensable to an army as to militate against any general law demanded for the benefit of the service, and the greatest amount of good to the larger number of young, active, and capable officers.

Of course the bill will affect the medical as well as other officers of the corps, and will cause the retirement of four or five surgeons who have long and faithfully served their country in camp and in the field, and who have won for themselves high and distinguished positions in the ranks of their profession. But it will behove them, with others of their class, to gracefully acknowledge the justness of a measure which must tend to the increase of the efficiency of the general service. With all these gentlemen, it should be a matter of congratulation that they have attained their present age without physical disqualification for duty, and that the remainder of their lives can be passed in the ease well earned by long and faithful work.

But there is one other aspect in which this question should be viewed in the interest of all concerned. While the army should not be inconvenienced by the inefficiency of its officers, the latter in their turn should not be made to suffer by the enforced retirement, in so far at least as it may be accompanied in the usual allowance of half-pay. It would seem to be no more than a matter of simple justice that the long and honorable service which must be given to the country before the age for retirement arrives, should be sufficient to warrant the continuance of pay for the comparatively few years of life that may remain. Especially would such a course be considered proper in view of a law making retirement compulsory at such an age. This is the least reward that should be due to such gentlemen as may come under the general provisions of the bill in question.

THE ASSOCIATION FOR THE PROTECTION OF THE INSANE. WE are in receipt of a circular announcing the annual meeting of the Association for the Protection of the Insane and Prevention of Insanity, which is to be held at Municipal Hall, in this city, January

20th. We have also the report of the secretary, Miss A. A. Chevaillier, giving an account of what the association has already accomplished and of the objects for which it is still striving. This document is an admirable presentation of the subject, and testifies incontrovertibly to the good which the association has already done, as well as to the great possibilities before it.

The association has by its active agitation helped to arouse asylum superintendents and officials from their conservative ways. Reforms in care and treatment have been introduced.

Many of the medical profession and of the laity have been taught better ideas regarding the needs and treatment of the insane.

The association has won the confidence of some of the best asylum superintendents, nearly a dozen of whom have joined its ranks.

It has printed and circulated numerous lunacy documents, and has assigned work to various experts, who will report at the coming meeting. The secretary of the association, in the same line of work, is commissioned to compile an abstract of all the laws relating to lunacy in each State.

From the foregoing statements it can be seen that the association has already worked industriously and not without results.

What has already been done shows sincere and intelligent effort, and gives promise of the highest future usefulness.

The coming meeting of the association deserves attention and interest from the profession.

RECENT EXPERIMENTS WITH CARTILAGE.

A SERIES of experiments in the transplantation of cartilage has been made almost simultaneously on each side of the Atlantic. The experimenters, Dr. Leopold, of Leipsic, and Dr. Michael T. Prudden, of this city, were seeking the solution of entirely different problems, viz., that of the origin of tumors, and that of the pathology of inflammation. The methods adopted, however, were in many respects similar, and may with profit be described together.

Dr. Leopold, whose researches are published in Virchow's *Archives*, August, 1881, aimed to obtain some facts which should substantiate Cohnheim's theory as to the origin of tumors. All tumors, according to Cohnheim, are derived from small residues of embryonic tissue which remain undeveloped in the general growth of the body. When, later in life, these small residues receive the proper stimulus, they develop and constitute tumors. It may be easily supposed that this theory, however seductive to the imagination, must be very difficult of demonstration.

No one has ever seen these undeveloped nests of possible neoplasms, and doubtless no one ever will. At any rate, all attempts to supply any solid data for the support of the theory have been directed, not to searching for the hypothetical embryonal tissue, but in another way, that of transplanting living cells from one animal to another. The history of these attempts, as given in the *British Medical Journal*, shows that two series of experiments of this sort had been made previously to those of Leopold now to be described. Cohnheim and Maas introduced into the jugular vein of an animal, pieces of periosteum from the tibia of rabbits, dogs, or fowls. These passed into the lungs, became vascularized there, and in about two weeks developed into cartilage, and then into true bone. This bone, however, always disappeared again within a week or two. The experiments had but little significance.

In 1878, Zahn introduced into the jugular veins of rabbits, bits of hyaline cartilage from adult animals. No growth followed. When, however, he substituted pieces of embryonic cartilage, the lungs were found, after a time, to contain numerous small cartilaginous nodules with calcified centres.

In imitation of Zahn, Leopold used the embryonic cartilage of a rabbit. Bits of this were inserted into the anterior chamber of the eye, others were placed in the abdominal cavity. Sixty-one experiments were performed in all, the majority of them being upon the eye. Here, in a certain proportion of cases, the transplanted cartilage grew to two or three hundred times its original size. In this way Dr. Leopold claims to have produced, artificially, a true enchondroma. He concludes that the admissibility of Cohnheim's hypothesis is now made good. This will by no means be conceded.

Dr. Prudden's experiments, as recorded in the *American Journal of Medical Sciences*, were made with the view of throwing some light upon the origin of the pus-cells in an acute inflammatory process. It is still uncertain in any given case whether the rapidly accumulating cells in an inflamed area are derived chiefly from local proliferation, or are cells which "wander" in from the blood-vessels or elsewhere. It is apparent that, if a multiplication of cells were observed in the central parts of cartilage, away from the blood-vessels, the increase would have to be ascribed to local proliferation. For cartilage is not only non-vascular, but the minute channels in its substance (if they exist) are too small to allow the entrance of outside wandering cells.

Dr. Prudden's experiments were very numerous, and were carried out with most intelligent and laborious exactness. More than two hundred bits of hyaline cartilage were inserted into the subcutaneous tissue of living rabbits. These were allowed to remain for periods varying from one to three hundred and ninety-nine days. They were then removed, if not absorbed; their sections were made, and the microscopic appearances were studied. In most cases the cartilage was transplanted while living.

The fate of the tissue in its new environment va-

ried. At first the pieces became surrounded with granulation tissue. After this, in some cases the cartilage was absorbed, in other instances it became encapsuled, in which condition it would remain for a long period of time. In only one instance was there a new formation of hyaline cartilage. Here the new cartilage was very slight in amount and was embryonal in character.

From a microscopic study of the changes in the cells and basement substance of the living transplanted cartilage, the experimenter drew the following conclusions: 1st, that the cells of cartilage transplanted alive may live on unchanged for many months; or, 2d, that they may lead to the formation of embryonal cartilage; or 3d, that they may, on absorption of their basement substance, change their shape and size; or 4th, that they may undergo active proliferation and take part directly in the formation of young forms of connective tissue, similar to those produced by cells from other sources.

It cannot be said that these conclusions embody anything that had not been either known or very confidently assumed before. Nevertheless they are valuable, because they stamp with so much definiteness our knowledge of the life-history of one particular class of cells.

As regards the origin of tumors, Dr. Prudden's investigations, though not performed with embryonal cartilage, negative to a certain extent Dr. Leopold's experiments. For the second conclusion of the former gentleman means in effect that an enchondroma may be developed from the *mature* cartilage as well as embryonal.

The disproval of Cohnheim's hypothesis, however, is rather a work of supererogation. No data, experimental or otherwise, have yet been secured which furnish demonstrative evidence of its tenability.

THE RESPONSIBILITY OF GUITEAU.

The arguments at Washington over the question of Guiteau's responsibility have been anything but satisfactory to those interested in medico-legal science. The old-fashioned legal test has been presented by the prosecution. The real question, whether the crime was caused by disease, has been ignored. There has also been much talk about striking the death-blow to moral insanity.

All this shows that the trial is, from a scientific standpoint, carrying us backward instead of forward.

The question of responsibility is beset with difficulties and complexities of many kinds. There is no doubt that a man may be a moral as well as an intellectual imbecile. There are effective insanities as surely as there is a disease called epilepsy. Society dare not, however, call moral imbeciles, or those who are organically criminal, anything but wicked. Again, there are some insane who can and do restrain themselves from vicious conduct, or who knowingly and maliciously do wrong. This has given rise to the somewhat novel view that a person may be insane and yet punishable.

In the case of Guiteau, the wrongfulness and illegality of his action was undoubtedly intellectually understood, but it was only feebly felt. Guiteau's crime was the result of a depraved ambition working in a brain not perfectly sound. But it was wickedness which was the predominant factor. The brain, if not entirely healthy, yet had not disease enough ever itself to have caused the crime. It is Guiteau's previous life, not his last murderous act, that may hang him.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 14, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

The President presented, in behalf of a candidate, a specimen of *purpura*.

REMOVAL OF A CYST OF THE PANCREAS WEIGHING TWENTY AND ONE-HALF POUNDS.

Dr. N. Bozeman presented a specimen accompanied by the following history: it was interesting with reference to three particulars; first, as having been removed from the pancreas of a living woman; second, as having been mistaken for an ovarian cyst; and third, as being the first operation of the kind upon record. The patient was the wife of a prominent physician of Texas, forty-one years of age, tall and robust, weighing nearly two hundred pounds, and perfectly healthy up to seven years ago, except occasional attacks of dyspepsia. Seven years ago she had, for the first time, pain in the right iliac region, extending down the right thigh and occasionally attended with numbness. Five years ago the abdomen began to enlarge, slowly at first, but gradually increased in size upon the left side, with a corresponding flatness upon the right side. The point at which the enlargement was first noticed was higher than would naturally be expected for an ovarian cyst. At that time no special importance was attached to the enlargement of the abdomen, either by herself or husband, who frequently examined the tumor. It progressed in the ordinary way up to six or seven months ago, when it suddenly began to grow rapidly, and finally the entire abdomen was distended symmetrically. At the same time the patient began to lose flesh. The case was diagnosticated as one of ovarian cyst by Professor Richardson, of New Orleans, who advised the patient to consult Dr. Bozeman. On November 19, 1881, the patient having entered the Woman's Hospital, Dr. Bozeman examined her and diagnosticated ovarian cyst. She was also examined by his colleagues, Drs. Thomas and Emmet, both of whom confirmed his diagnosis. An operation was decided upon, and it was performed on the second day of December, under Listerism. Nothing unusual presented itself in the early stage of the operation. When the tumor was reached through an incision below the umbilicus, its appearance was nearly that presented by an ordinary unilocular ovarian cyst, except, perhaps, it had a little deeper pearlish color. It was tapped

and two and one-half gallons of fluid were removed. After the greater part of the fluid was drawn off, about two-thirds of the cyst was drawn through the abdominal opening, and then for the first time Dr. Bozeman suspected that it was not ovarian. He then passed his hand into the peritoneal cavity and found the uterus and both ovaries, and also determined that the cyst had an origin somewhere in the upper part of the abdomen. The abdominal incision was extended upward two inches above the umbilicus. The stomach was then found crowded against the diaphragm, and the bowels were deep in the abdominal cavity below the cyst. The cyst had an extensive attachment, apparently to the transverse mesocolon. After some manipulation he finally reached the pancreas, where he discovered a large vein, subsequently determined to be the splenic, which was very tortuous, and offered considerable obstruction to the operation, owing to its close relationship to the pedicle. Finally he traced the cyst down until he reached the tail of the pancreas, which was turned up on the side of the cyst, and firmly adherent to it to the extent of two inches. He then proceeded to separate the extremity of the pancreas from the cyst by dissection, and when completely separated the pancreas spread out and presented its natural appearance. The attachment of the cyst was at the junction of the outer with the inner two-thirds of the organ, and it had a pedicle three-fourths of an inch in length and about three-fourths of an inch in diameter. The veins of the pedicle were very large. Having fairly reached the pedicle, he transfixed it with a needle, ligated it in the usual way, and cut it off. The result was that he cut out the bottom of the cyst, as shown in the specimen. The portion of the cyst, however, which remained attached to the pedicle was subsequently completely removed by dissection. The artery which supplied the growth was doubtless a branch of the splenic, and it had attained a very large size—as large as the brachial. The loss of blood was small, and not a single bleeding vessel required a ligature. The fluid which the cyst contained was of a light brownish color, its specific gravity was 1020, and it had an acid reaction, in that respect differing from the fluid removed from the ordinary ovarian cyst, which is alkaline. The girth of the patient before the operation was forty-one inches, and both oblique measurements, from the anterior superior spinous processes of the ilia to the umbilicus, were the same—nine inches. The tumor, with the fluid, weighed twenty and one-half pounds.

The specimen was also interesting in another respect, namely: with reference to the point of attachment, which was almost precisely in the position occupied by the bullet in the late case of our deceased President. The patient underwent special preparation for the operation. She took salicin, fifteen grains three times a day for two weeks. On the morning of the day on which the operation was performed she received fifteen grains of quinine with one of opium, and when she went upon the table she was thoroughly cinchonized. The patient rallied from the anæsthetic and from the operation without any shock whatever. After the operation she took by the rectum, at intervals of six hours, ten grains of quinine with two ounces of beef-juice, half a drachm of liquor opii comp., and two drachms of brandy. On the third day the temperature reached its highest point, 101.5° F., but the pulse never rose above 98. Subsequently the pulse fell to 80, and the quantity of quinine was gradually lessened, but on the eighth day after stopping the quinine the temperature rose to 102.8 F. The quinine was again resumed, ten grains every six hours, and the temperature in the course of thirty-six hours fell to 99.5 F., and subsequently the patient had progressed in the most satisfactory manner, and there was every prospect of a complete recovery.

Dr. William Henry Porter presented specimens from a case of

CATARRHAL PHTHISIS—PLEURISY WITH EFFUSION—EMPHYSEMA—CARNIFICATION OF THE LUNG.

The patient was first admitted to the service of Dr. A. Hadden, at the Presbyterian Hospital, with the following history: F. B——, sixteen years of age, born in Ireland, single, and a bartender, was admitted December 15, 1877. Family history strongly phthisical. Previous history free from syphilis. Present illness commenced, one month before admission to hospital, with a severe hæmoptysis, which was followed by mild attacks. The hemorrhage yielded to ergot. On January 29th patient developed a pleuro-pneumonia of left side of a mild type, which was followed by slight effusion of fluid into the same pleural sac. From the pneumonia he readily recovered, but evidence of the fluid still remained. March 16th he felt so well that he was, at his own request, discharged.

The patient returned to his business, which he followed until September 8, 1878, when he was readmitted to the hospital with all the rational symptoms of phthisis. Physical examination of the right side revealed phthisis, but on the left side gave evidence of a chest full of fluid. The patient was first placed upon a tonic and diuretic treatment. This, however, did not diminish the quantity of fluid in the left pleural sac. September 16, 1878, the patient was aspirated, and one hundred ounces of fairly clear fluid withdrawn from the chest-cavity. This gave temporary relief, but the chest soon refilled. Physical examination gave evidence of rapidly progressing phthisis on the right side, displacement of the heart to right, so that the apex-beat was nearly in the median line. November 8, 1878, a free incision was made into the left pleural sac, between the sixth and seventh ribs, and one hundred and twenty ounces of stinking pus withdrawn. At the time of the operation a flexible catheter was introduced into the chest-cavity. From November 8th until the time of his death the cavity was thoroughly cleansed twice daily with disinfecting fluid. After the free opening into the chest the patient improved for several weeks, but finally sank gradually, and died March 16, 1879.

Necropsy, thirty-two and one-half hours after death. —Body much emaciated. Rigor mortis marked. One bed-sore over the trochanter major on the right side. Drainage-tube projecting from left side. When the anterior wall of the chest-cavity was removed, a large, empty space presented, in place of the left lung or fluid. The pericardium and breast were in the median line. The right lung filled the right side of the chest-cavity. There was not more than four ounces of fluid in the left pleural cavity. The whole chest-wall was in a sloughing condition, and in many places all the soft tissues were entirely destroyed, leaving only bare bone. The pericardial sac and heart did not present anything specially abnormal. Heart was anæmic (?).

The left lung was compressed to a small mass, not larger than a man's fist. Many of the bronchi protruded beyond the surface of the compressed lung.

Although sealed at their protruding ends, they had apparently been open during life. This lung was undoubtedly in a state of complete carnification, both air-vesicles and blood-vessels being obliterated to a marked degree. The right lung was one mass of large and small cavities, surrounded by zones of cheesy masses. The spleen was waxy, and weighed seven and one-half ounces. The kidneys were enlarged, and the seat of the ordinary chronic parenchymatous degeneration of phthisis. The left kidney was the seat of several large, cheesy masses. There was no intestinal ulceration. Nearly all the mesenteric glands were markedly enlarged. The liver was enlarged and fatty.

The specimens were of interest because they showed the difference between a carnified lung and simple compression, in that the bronchi resist destructive changes longer than does the pulmonary tissue, and may protrude beyond the surface of the lung and open into an empty chest-cavity. The case was also interesting as one showing that a free opening into a pleural cavity which contains pus may relieve the suffering of the patient and prolong life.

PRIMARY SARCOMA OF THE KIDNEY.

Dr. Porter also presented a primary sarcoma of the left kidney, with following history: Mrs. K——, twenty-five years of age, about five months prior to death gave birth to an apparently healthy child. One month later she noticed, for the first time, a tumor in the right side of the abdomen. This protrusion rapidly enlarged. One week before death she came to the Presbyterian Hospital for surgical relief. As she was not a fit subject for operative interference, she was transferred to the medical side, under the care of Dr. McBride, to whom he was indebted for the specimen. As she seemed so near death, no accurate history was obtained. Unilateral œdema, however, was noticed, affecting the left limb. The patient died a few day after admission.

Necropsy by Dr. Simpson, house physician, twenty-four hours after death.—Rigor mortis marked. Body rather spare. There was a decided protrusion of the abdomen in the left lumbar region.

Thoracic cavity.—The pericardial sac was normal. The heart was unusually small, but was not weighed, as the heart and lungs were removed *en masse*. There was a small, whitish spot in the substance of the left ventricle, about the size of a hazel-nut. This new-growth, apparently of the same character as that in the kidney, involved the whole thickness of the ventricular wall; aside from this, the heart was normal throughout. The apex of the heart, however, was in the median line, due to the presence of one hundred and fifty ounces of serous fluid in the left pleural cavity. The left lung was consequently compressed to a very small mass and covered with a fibroplastic exudation, but admitted both air and blood—differing in that respect from the truly carnified lung. The diaphragm was thickened by an infiltration of the sarcomatous growth, made up principally of normal connective-tissue corpuscles embedded in a homogeneous matrix.

Abdominal Cavity.—The points of special interest were in the abdominal cavity, which contained about fifty ounces of fluid. The left kidney was found to be the seat of a new-growth which had converted it into a tumor weighing three pounds. The capsule was very much thickened. The pelvis was partially obliterated, the remaining cavity being filled with a grumous matter. The ureter was slightly dilated, and its wall very much hypertrophied. Upon microscopical examination very little renal tissue was met with, but the mass of the growth was sound connective-tissue corpuscles embedded in a homogeneous matrix. The right kidney also contained three masses of new-growth of the same nature. About one-half of the renal tissue remained. The retro-peritoneal glands were not involved. The alimentary tract was nearly normal, excepting the duodenum and stomach. The left side of the second portion of the duodenum was firmly adherent to the left kidney, the growth implicating the coats of the gut to such an extent that the mucous membrane at that point presented a white patch of the same consistency as the tumor itself. The splenic flexure of the colon was adherent to the growth and displaced downward, but was not infiltrated by the neoplasm. The stomach was displaced, the greater curvature carried down and forward. The stomach was enormously dilated, evidently due to a twisting of the duodenum, which partially occluded its lumen. The posterior wall of the stomach was against the tumor of the left kidney and firmly bound to it, but was not invaded by it. The mucous membrane was soft and boggy, and the seat of a number of ulcers varying in size, the largest being about the size of a one-cent piece. At seventeen places the mucous membrane was completely destroyed. There was no obstruction at the pyloric opening. The ovaries were slightly enlarged and the seat of numerous small cysts.

The case was of interest on account of the variety of this form of tumor in the kidney, with regard to its extension to the opposite kidney and through the diaphragm, while the stomach and colon which were equally as adherent, were not involved; also, as bearing upon comparative pathology and in connection with a specimen of sarcoma of the kidney in a cow, presented at one of the meetings last winter, by Dr. T. E. Satterthwaite.

Dr. Porter also presented a specimen—

CARCINOMA OF THE BLADDER,

which he removed from a horse. There were secondary deposits in the retro-peritoneal glands. Gray gelding, sixteen or eighteen years old. Thin in flesh. The animal had been in poor health for one year previous to death. During this time he had been subject to repeated attacks of colic, and for that reason the animal was turned out to grass.

About three years ago the horse had turns of standing with outstretched legs, apparently straining with a desire to micturate. From these symptoms, however, he apparently recovered. Prior to October 14, 1881, the horse had been treated by a veterinary quack.

On October 14th, Dr. George H. Parkinson, of Middletown, to whom Dr. Porter was indebted for both the history and the specimen, first saw the case, and learned that the previous treatment had consisted simply in the administration of diuretics.

Symptoms, October 14th.—Pulse, 40, and very feeble. Respirations not disturbed. Abdomen distended, the animal having just drank a large quantity of water. Œdematous swelling of the sheath and of the tissues on either side of linea alba to the posterior limit of the sternum.

There was a discharge from the nostrils; their mucous membrane was of a bluish or copper color; appetite poor. It was noticed that the animal frequently attempted to micturate, passing each time only a very small quantity of bloody urine, with a

few small coagula. The passage of the urine and clots caused the animal great pain.

A rectal examination was made, but the bladder could not be found; but in place of a partially distended bladder, commonly felt in rectal examinations, there was a large mass or tumor, situated to the right of the median line, and anterior to the symphysis pubis. When the mass was pressed the horse groaned as if from pain, and passed a small quantity of bloody urine containing several small clots.

A diagnosis of malignant growth, probably carcinomatous in character, was made, and an unfavorable prognosis given.

No treatment was instituted except rest in pasture.

October 25th.—The animal became so weak that he could not get upon his feet, and was killed.

Necropsy, a few hours after death.—The abdominal cavity was well filled with fluid, having a strong, urinous odor. Both the parietal and visceral layer of the peritoneum were studded with tubercle-like masses, varying in size, and probably enlarged retro-peritoneal glands. The mesentery and omentum appeared to be a solid mass of these new-formations.

The liver and spleen were both much enlarged, and also had several small masses upon their surface, resembling those in the mesentery. The liver was pigmented, and slightly cirrhotic on microscopic examination. The stomach was full of fluid, and it also contained a little grass. The mucous membrane was of a deep yellow color, probably from post-mortem bile-staining. The inguinal glands were enlarged, and where cut open showed points of fatty degeneration.

Microscopical examination of this tumor of the bladder and the enlarged glands.—The new-growths were made up of dense masses of fibrillated connective tissue, forming numerous alveolar spaces, which were filled with large, irregularly shaped, nucleated epithelial corpuscles. There was no special order of arrangement of the epithelial elements. The sections closely resembled the conditions commonly met with in the scirrhous carcinoma of the breast. The specimen is of interest in connection with comparative pathology, which is rapidly gaining prominence in all countries.

PREHISTORIC SYPHILIS—A TIBIA.

Dr. F. N. Otis presented a tibia sent to him by Dr. D. L. Huntington, assistant curator of the Army Medical Museum at Washington, which had been received from Dr. Bickley, who found the bone, with others, in one of the ancient Indian mounds near Alexanderville, O. It was supposed that it possibly might possess some interest with refer to prehistoric syphilis, and therefore had been sent to Dr. Otis for examination. Attention had been called to this bone in an article on prehistoric syphilis, by Dr. Gustave Brühl, in the *Cincinnati Lancet* of May, 1880. The specimen presented was evidently of great antiquity, and, in view of instituting some comparison between it and bones known to be affected with syphilitic disease, Dr. Otis had made three sections of well-authenticated syphilitic bones, in order that it might be compared with these, and also with perfectly normal bone, of which he also presented specimens. He believed it was tolerably well settled at the present time, among scientific investigators, that there was nothing specific to be found in syphilitic bones; that the inflammatory processes were in the line of ordinary pathological changes; that periostitis, ostitis, caries, and necrosis were precisely the same, so far as the constituents of the diseased bone were concerned, when associated with syphilis, as when caused by injuries or by non-specific disease. He believed, however, that we might occasionally decide, with probability of being correct. For instance, where the ossific deposits or nodes were multiple and symmetrical, as when occurring on both tibiæ, and especially when associated with bony deposits at points protected from ordinary injury, as on the inner tables of the skull. Such coincidences would give strong support to the conclusion that the origin of the trouble was syphilitic. But when it is considered that rheumatism, rachitis, traumatism, and other causes of periostitis may, equally with syphilis, produce the eburnated variety of exostosis, it is readily seen how difficult an absolute diagnosis may become.

In the present specimen there was no exostosis—simply a hypertrophy, partly of the cancellous and partly of the eburnated varieties—just what is seen in parenchymatous ostitis from simple causes. Dr. Otis could not see in the specimen anything which would lead him to suppose that the diseased condition present was of syphilitic origin.

He believed that only one form of bone disease had been recognized which was truly characteristic of syphilitic disease, namely, that which Virchow had called dry caries, and specially found in syphilitic disease of the bones of the skull. In these cases there is a deposit of gummy material, the bone structure is absorbed, perhaps both the external and the internal table, sometimes completely. Where the external table is destroyed, the integument may not be involved at all, and the disease often exists without the consciousness of the patient, without pain, etc. He had seen a case in which the disease was characterized simply by depressions found upon different parts of the skull. That form of bone disease he had never known to arise from any other cause than syphilis.

Dr. Peabody confirmed the opinion given by Dr. Otis with reference to the specimen presented, and believed that its appearance was not different from that presented in bones which had been the subject of ordinary ostitis. The thickening which it exhibited could be easily explained by the existence of inflammatory processes independent of specific disease.

Inquiry was made of Dr. Otis as to whether Virchow did or did not consider the dry caries as specific in its nature, to which he replied that Virchow made the statement that he (Virchow) believed this affection peculiar to syphilis, basing this belief, not on any specific element found in this lesion, but on the fact that the chief characteristic of the dry caries was the entire absence of suppuration. Dr. Otis does not think the lesion in question can be correctly termed a caries. It is not suppuration or death of bone. The loss of bony substance which occurs is plainly due to absorption—*i.e.*, fatty degeneration from pressure—resulting from the presence of gummy material deposited, or rather imprisoned in the cancellous structure of the bone; and further, that gummy material does not differ in its appearance or physical properties from the gummy material deposited in the soft tissues. When caries or death of bone occurs, more or less suppuration is inevitable. Analogous to this is the absorption of the gummy material with cicatricial depression, and without suppuration, in the tuber-

cular syphilide. Virchow states that the chief characteristic of the so-called dry caries of syphilis is *the entire absence of the suppurative process.* In closing, Dr. Otis remarked that Rindfleisch, in his "Pathological Histology," states distinctly that there is nothing texturally different in the osseous inflammations, caries, and necrosis of syphilitic origin, from that resulting through non-specific causes.

(To be Continued.)

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 3, 1882.

DR. T. A. MCBRIDE, PRESIDENT, IN THE CHAIR.

THE paper of the evening, entitled

THE EFFICACY OF POTASSIUM IODIDE IN NON-SYPHILITIC ORGANIC DISEASES OF THE NERVOUS SYSTEM,

was read by DR. E. C. SEGUIN.

The speaker said that he intended his paper should be clinical and suggestive rather than an exhaustive and didactic one.

There is apparently a belief in the specific power of potassium iodide upon disease. Some teachers were in the habit of saying: Give iodide, and we will see whether the disease is syphilis or not. A good many physicians think that because a patient is helped by potassium iodide he is therefore syphilitic, and has not perhaps given a truthful history of his case. The speaker did not believe in this specific action of drugs, though it was a very comfortable theory to hold. He thought that drugs acted upon the organism, not upon the disease.

Dr. Seguin wished to make the arguments for his position as much clinical as possible. He would present nine cases illustrating the efficacy of potassium iodide, these cases being divided for convenience into three groups.

The first group comprised those of organic disease of the brain, in which symptoms were relieved by the iodide. The patients finally died, however, and post-mortems were made.

The second group comprised cases of which two were cured and one relieved.

The third group comprised cases of basilar meningitis, with optic neuritis, in children. These cases recovered rapidly under the iodide.

Not so much importance was attached to this last group.

FIRST GROUP—CASE I.—*Tumor of crus cerebri.*—Patient was a boy aged nine; had always been healthy. In April, 1874, had measles; in May there appeared awkwardness in right side of body. This gradually increased till finally paresis of right arm appeared. By August he was worse; right arm paralyzed. Then sharp pains in various parts of head began to trouble him; and with this were nausea, vomiting, and twitchings of paralyzed side; also double vision, and later strabismus. Pulse habitually slow; no convulsions or loss of consciousness. When examined by Dr. Seguin, the patient was conscious; right side hemiplegic; palsy of left sixth cranial nerve; slight rigidity of fingers of right hand; some ataxia of right upper extremity; staggering gait; optic neuritis.

Ordered blisters behind the ears, and potassium iodide. He then had severe symptoms again: headache, vomiting, pains in calves of legs. These were relieved by the iodide.

The patient was seen at rare intervals by Dr. J. C. Shaw until the spring of 1880, when he died.

Autopsy showed pressure on the left crus cerebri and left side of the pons by a sarcomatous tumor.

CASE II.—*Cerebellar tumor, with hydrocephalus.*—The patient, a boy, had suffered several months from severe headaches, staggering gait, and vomiting; exophthalmus. He had no paralysis or impairment of intelligence, or epileptiform seizures.

He improved under iodide of potassium. Shortly after there was a great enlargement of the head, with separation of lambdoid and sagittal sutures.

With the appearance of this enlargement and bulging, improvement took place; the exophthalmus disappeared. An examination of the child was made at this time. The face was pale; vision apparently good, but choked disc was present. All the cranial sutures wide open. No exophthalmus. In the right occipital region, in the vicinity of the lambdoid suture, was a soft tumor, which pulsated simultaneously with the heart. Feeble gait, but no paralysis. Ordered iodide of potassium. This was given in very large doses (90 to 150 grains per day), with relief of headache and many of the symptoms. The patient died the next spring. Autopsy revealed cerebellar tumor of fibro-sarcomatous character. This pressed on the venæ Galeni, causing hydrocephalus. The case was under the care of Dr. Malcom McLean, of Harlem.

CASE III.—*Tumor of cerebellum.*—The patient, a boy of fourteen, had been healthy. In June, 1876, he fell heavily on a stone walk. Four months later, began to have attacks of vomiting, without nausea. At length, after vomiting he went into general convulsions. These symptoms continued. He gradually became paralyzed in all his limbs, though more on the left side. There was atrophy of optic nerves and loss of vision. Spontaneous improvement now occurred. He regained use of limbs, and except for his eyes, was almost well. Mind bright. No further symptoms for four years. In May, 1880, he began to have attacks of pain in the occipital region, and vomiting. One day he was found unconscious. He was occasionally dizzy. Still able to be up and dressed.

Examination at this time showed left conjugate deviation of the eyes; tongue straight; left leg and hand stronger than right; no patella reflex; no distinct ataxia, and the gait was not that of the type called cerebellar ataxia. Ordered bromide and iodide of potassium. One month later he had improved wonderfully. He then grew somewhat worse again. The iodide was increased and bromide omitted, with the best results. He afterward grew worse again.

On October 12th he was seized with vomiting and convulsions. Death soon followed. Autopsy revealed a tumor involving a large part of the anterior portion of the right hemisphere of the cerebellum, which was the same side as the paresis. It forcibly compressed the underlying portions of the mesencephalon. Almost the whole of the right hemisphere of the cerebellum was disorganized. An acute meningitis of the convexity had been the immediate cause of death. The tumor was a sarcoma, containing masses of amyloid degeneration, some having a branch-shaped appearance, and being probably amyloid blood-vessels. The boy's family was an unusually healthy one. The teeth were normal.

SECOND GROUP—CASE I.—*Left hemiparæsthesia cured by potassium iodide.*—The patient, a surgeon in the United States Army, had always enjoyed good health. In 1874 he had a sudden attack of heminumbness, which lasted for a long time. It was felt in ulnar side of left hand, outer side of left leg, and

occasionally in left cheek. No true anæsthesia, ataxia, or chorea. The heart was large and beat heavily, but had no organic lesion. Patient had several angina-like attacks. There was well-marked dementia. Patient's habits have always been good; positively and repeatedly denied syphilis.

Ordered iodide of potassium. The paræsthesia disappeared in a few weeks. Subsequently patient developed dementia paralytica.

Case II.—*Paralysis of third cranial nerves—Paresis and ataxia of limbs.*—The patient, a man aged twenty-nine, had always been healthy, except that of late he had suffered from excessive use of beer and tobacco, and had had a catarrh of the bladder. July 2, 1878, while camping in the woods, he awoke with a paralysis of the left third cranial nerve. July 30th he felt a sensation of numbness, and weakness in the legs. Was ordered ergot, dry cups, rest in bed. About August 1st the right third cranial nerve became paretic. All the symptoms indicated involvement of crura cerebri. Ordered iodide of potassium in large doses. Within a month patient is much improved, both the third nerves are better.

Takes ℥ j. pot. iodid., t. i. d. September 2d, right eye normal; left, nearly well. Iodide continued. December 11th, no change. In spring and summer of 1879 the condition of left third nerve varied, and the amount of iodide given was varied accordingly.

November, 1879. — New symptoms developed. Slight numbness and anæsthesia in left trigeminus; legs are weak; there is slight numbness also in thighs; left facial muscles appear weak; tongue projects straight.

Ordered increase of iodide.

October, 1880.—The patient had been almost cured except for his weak left third nerve. He resumed the use of beer and tobacco, however, and, as a result, a number of symptoms came on: an ataxic walk, absence of patellar reflex; marked anæsthesia and ataxia of hands; left third nerve still paretic. No headache at any time. Treatment was continued, but there was no improvement. In the first part of the disease, however, the iodide relieved the symptoms in a most notable manner.

Case III.—*Right hemi-epilepsy with aphasia cured by potassium iodide.*—The patient, a young man, when first seen was suffering from repeated epileptiform attacks. He was a well-developed person, who had always been well; never had had syphilis. In August last he had an attack of what he called sunstroke, but it was probably his first epileptiform seizure. He got a little better, then the attacks recurred. They were stronger on the right side. Patient was put on potassium bromide. He continued to have attacks. Had innumerable slight attacks every day, affecting right side of face and arm, not always with loss of consciousness. Sometimes there were facial spasms alone. Grs. 125 to 150 of potas. brom. given daily by former physician.

October 2d.—Patient is better; no spasms for forty-eight hours. Is completely aphasic. Ordered potassium iodide along with the bromide. This mixture was continued, the bromide being gradually decreased, and iodide increased until finally only the former was given. Improvement was steady, and finally complete recovery was established.

Third Group—Case I.—*Basilar meningitis.*—Patient was a girl, aged six years. One brother had phthisis; another child of same parents died of brain fever. For three weeks the patient had been suffering from headache and vomiting. When seen there was marked internal strabismus, also optic neuritis. The history of the patient, with other symptoms, led to the conclusion that there was an incipient basilar meningitis, probably non-tubercular. Ordered potassium iodide and blisters at the back of the neck. Improvement at once began and resulted in recovery.

Case II.—*Basilar meningitis.*—The patient was a girl, aged fourteen years, previously healthy. The first symptoms appeared four weeks before examination, and consisted of dulness, irritability, slight headache, once vomiting, internal strabismus of one eye. Examination showed double neuro-retinitis. Diagnosis, non-tubercular basilar meningitis. Under iodide of potassium there was rapid improvement, and, so far as known, recovery.

Case III.—*Basilar meningitis.*—Patient was a girl, aged five years. Had chicken-pox in January. January 19th left internal strabismus appeared. Other symptoms followed. Examination of eyes showed double neuro-retinitis. The same diagnosis was made and treatment ordered as in previous case, with equally good results.

In commenting on the preceding cases Dr. Seguin said that they were only a few of a large number in which he had seen the same results follow the use of the iodide. He was aware of the possibility of deception as regards their having been syphilis. Still he had taken every precaution to assure himself upon this point in the cases cited as well as in others. The speaker also referred to the large doses of the drug which could be given with apparent impunity—from 30 to 150 grains three times a day.

Dr. Wm. A. Hammond, in opening the discussion, said that for several years he had adopted the plan described by Dr. Seguin, and his experience amply sustained that gentleman's. He related some recent cases illustrating this. One was that of a patient who had been treated for syphilis. He was doubly hemi-paretic; all his extremities were very weak. He could not walk. He had double vision, intense pains in the head, and difficulties of speech—aphasia. He was put on iodide of potassium with the best results, becoming entirely well except for the double vision. He had always strenuously denied having syphilis, and there were no evidences of it.

In another case, seen three years ago, the patient when first observed was suffering from intense pains in his head, and was deaf and completely blind. There was no history of syphilis. Iodide of potassium was recommended, but no benefit followed until the patient had reached a dose of 240 drops of the saturated solution. The pains then disappeared, and hearing and eyesight returned. The patient became entirely well.

In some cases the speaker had given as much as 350 drops of the saturated solution at a dose without any inconvenience to the patient. He attributed this to the fact that he made his patients take a great deal of water at the same time; sometimes even a pint. In this way iodism was prevented.

Dr. R. W. Amidon related a case which illustrated the efficacy of iodide of potassium.

As regards the manner in which the iodide acted in such cases as has been cited, the speaker thought that it affected, not the neoplasm, but the circulation around it. This is very much impeded in these cases. We know that the potassium salts are cardiac sedatives, and tend to dimisnish arterial tension. If we weaken the heart, which is acting a little more

strongly than usual, it will give the veins a chance to empty themselves and relieve the distended capillaries. This seemed to be the most reasonable way of explaining the action of the potassium salts. The speaker doubted whether the iodine had much to do with this action. On this point more definite knowledge was needed.

Dr. Weber said that his experience with the iodide of potassium had been large. He had seen no curative effects from it except in syphilis, certain forms of articular rheumatism, and bronchial diseases. So far as non-specific diseases of the brain or spinal cord are concerned, he thought last year that he had met with a case which the iodide cured. But he found afterward that the patient had probably had syphilis. The patient, a man fifty-two years of age, had all the symptoms of general paralysis, and was to be transferred to the Bloomingdale Asylum. Dr. Weber was called in, however, and though convinced of the diagnosis, thought he would first try the iodide upon him. It was given in drachm doses, and, to the speaker's astonishment, there was great amelioration of the symptoms. He found afterward that the wife had syphilis.

Regarding the modus operandi of the remedy, the speaker expressed his belief that its diuretic powers had a great deal to do with its efficacy. In certain forms of dropsy, nothing will produce relief so rapidly as the iodide, which in these cases markedly increases the amount of urine passed.

With regard to the dose, there were some persons who had iodiosyncrasies against it, and in these a dose of two or three grains could not be borne. When it is borne, it is quickly eliminated by the kidneys, and it probably thus relieved the œdema around tumors.

The speaker thought it not easy to tell always whether there had been syphilis or not. Even the most honest persons may deceive themselves and their physician.

Dr. William J. Morton wished to corroborate most emphatically Dr. Seguin and Dr. Hammond in regard to the use of the iodide of potassium in such conditions as had been described. He had never found any trouble giving very large doses.

Dr. Seguin, in closing the discussion, said that he was entirely aware of the possibility of being deceived regarding the previous history of a patient. He had, however, every reason to believe that there was no mistake in the histories of the cases he had cited, nor in others in which he had successfully used the iodide. He agreed with Dr. Weber that the diuretic action of the drug might be connected with its therapeutical efficacy.

Elephantiasis of the Clitoris—Clitoridectomy. —Verrier operated upon a woman, twenty-eight years of age, whose trouble was of three years' standing. At first the tumor presented a slight degree of erection with a sensation of voluptuousness. It was voluminous, traversed by two or three sulci of rosy color, and occupied almost the whole of the vulvar orifice, into which it was impossible to introduce the finger without previous separation of the labia. The pedicle was continuous with the clitoris. The dorsal aspect presented quite an elevation. The excised tumor, without its sanguineous contents, measured six centimetres in length, three in breadth, and nine in circumference; its weight was ten grammes. —*Ann. de Gynec.*

Correspondence.

RESPECTING NEGLECTED PESSARIES.

To the Editor of The Medical Record.

Sir: One who sees much of gynecological practice will be inclined to question the fitness of the first word in your closing sentence of the report of Dr. Wendt's case of chronic perimetritis (*vide* pp. 718 and 719 of Medical Record for December 24th). There is nothing in the history of the case as published to show that there had "probably" been negligence on the part of the physician who placed the pessary *in situ*. Those who are accustomed to use special care in impressing upon their patients the importance of occasional examinations of those who wear a pessary know how often such advice is disregarded. I once removed a pessary which Dr. Graily Hewitt had inserted nearly fifteen years before, and which had caused ulceration of the vaginal tissues and derangement of the other pelvic organs. But I have no reason to believe that Dr. Hewitt is responsible for such results. I should doubt the statement of any patient who might tell me that her physician had given her no caution respecting possible danger, unless I knew enough of the character of the man to warrant such a belief. Patients are proverbially careless and forgetful, and doctors are not *all* ignorant and heedless, and in a matter like this, in which there is a question of responsibility, I believe that the latter should be entitled to the benefit of the doubt.

Very truly yours,

F. A. Castle.

New York, December 29, 1881.

ANTAGONISM OF OPIUM AND VERATRUM VIRIDE.

To the Editor of the Medical Record.

Sir: In the most excellent and valuable paper, by Dr. F. A. Castle, entitled, "Adjuvants, Corrigents, etc.," published in the Record of December 10th, I notice the following statement: "Opium and veratria appear to have a degree of antagonism when used in toxic doses, but I am aware of no published observations upon their effects when used therapeutically." Dr. Castle will find in Wood's "Materia Medica and Therapeutics" this statement: "In administering veratrum viride it should be always borne in mind that it will do no good in acute disease unless given in increasing doses until its physiological effect is produced. In almost all cases vomiting is to be avoided. To do this, small quantities of the drug should be given at short intervals, and corresponding doses of laudanum (5 to 10 gtts.) should be exhibited fifteen minutes after each dose. An hour is the best interval between the doses." Gross (see "System of Surgery," vol. i., page 93) and Tilt (see "Uterine Therapeutics") both advise that these drugs be given in combination. I use veratrum more frequently than any of the antipyretic agents, especially in traumatic fever, and invariably combine a small dose of sulph. morphia with it, say ¼ grain to a dose—thus perfectly preventing the vomiting and diarrhœa, and the pulse and temperature is reduced without the severity of the constitutional symptoms usually

present when the drug is pushed to its full physiological effect. I have had this fact beautifully exemplified this week in three instances: one, a woman, aged fifty-five, from whose scalp I removed a large cancerous tumor; a second, a negro, with three dangerous stabs in the back; and the third, a man whose legs I amputated for gangrene, due to frostbite. In each of the cases this combination controlled the fever admirably. I think that veratrum is safer than aconite, and even than gelsemium sempervirens. I am investigating this subject to the best of my humble ability, and hope to say more anon.

Respectfully,

THOMAS F. HOUSTON, M.D.

CLARKESVILLE, GA., December 14, 1881.

DENTAL SURGEONS IN THE ARMY AND NAVY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Referring to your editorial on "Dental Surgeons in the Army and Navy," you say truly, "there are a number of practical difficulties in the way of creating and furnishing these services." Our ships are already overcrowded with officials, and a dentist would be too expensive a luxury to be supplied to every vessel in commission, though one might be attached, with advantage, to each flagship and shore-station.

Practically, however, the work of the dentist could be done by the apothecary of every vessel, hospital, and station, if this important official possessed a sufficient knowledge of dentistry for the purpose. A graduate of pharmacy, qualifying himself for the position of a naval apothecary, would willingly take one or more courses in dentistry, if by so doing he could obtain the rank and pay of a midshipman or ensign. The dentist employed at the Naval Academy had no rank by law, and there is no such rank or grade as assistant surgeon. This is a *title!* The rank or grade of an assistant surgeon in the navy is that of master or ensign. This rank, however, is merely *relative* and has no actual value, as a staff-officer of the navy must not be addressed by his military rank, nor can he use it in his official signature.

NAVICULA.

FLORIDA AS A HEALTH RESORT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: While perusing Dr. Agnew's letter upon "Florida as a Health Resort," I recall a fact which was strongly impressed upon my mind two years ago, while spending the winter in Florida, that is, that nearly all Northern invalids visiting Florida remain somewhere along the St. John's River. It is true that the St. John's is a charming river, with its placid surface and wild borders. The orange groves are elegant and the air refreshing. Any weary mortal must enjoy the freedom of this great river. The weird scenery of (its tributary) the Ocklawaha is the most enchanting I ever witnessed. But the Doctor truly says of the St. John's that its banks are seldom twenty feet above tide. Swamps are on every hand. Now swamp and heat may produce malaria, and such is the fact in Florida. I encountered such malaria on the east as well as the Gulf coast. Both coasts are, to a large extent, water-logged swamps, steaming wish fogs and dripping with dews. As far as possible, such conditions should be avoided by most invalids. But can they be avoided in Florida? To a large extent, yes. Florida is not all so flat and so near the level of the sea. Half-way from Jacksonville on the east, to Cedar Key on the west, is the backbone of the peninsular portion of the State, about two hundred and fifty feet above the ocean. Here we find the land quite rolling, the streams in more active motion, the drainage better, the water purer, and the air drier. Here inland, and on comparatively high and dry land, away from coast winds, with many advantages and few disadvantages, I would advise the invalid visitor to Florida to go. The most accessible town on this high ground is Gainesville, Alachua County. It can be reached by rail from Fernandina, Jacksonville, Pilatka, or Cedar Key. While no one must expect full city life, he will find gentlemanly citizens, excellent hotels, good doctors, churches, livery stables, guides, etc. To those who enjoy the rod or gun, Gainesville will be a delight six days in every week.

Respectfully,

W. B. BRADNER, M.D.

WARWICK, ORANGE CO., N. Y., January 2, 1882.

THE QUESTION OF REFLEX DISTURBANCES FROM GENITAL IRRITATION.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In THE MEDICAL RECORD for November 19, 1881, there appears a report upon a paper read by Dr. L. C. Gray, of Brooklyn, before the New York Neurological Society, upon the subject, "The Question of Reflex Disturbances from Genital Irritation." The report is quite extensive, the discussion following the reading of the essay was very interesting, and you have thought the matter of sufficient importance for editorial comment.

When I read the report and discussion—which I did with much pleasure—I thought the omission of any reference to my own, and, I think, original observations on this subject, was due to the necessarily imperfect character of a report of this nature But as Dr. Gray's paper has just been published in the January (1882) number of the *Annals of Anatomy and Surgery*, with only a passing allusion to one of my opinions, and without any reference to my papers, I feel that I may trespass on your time and space and venture to call the attention of your readers to the fact that the most important conclusions reached by Dr. Gray, and that many of the points referred to by him and discussed subsequently by the eminent gentlemen present, have been covered by me in an editorial on "Indiscriminate Circumcision" in the May (1881) number of the *Annals of Anatomy and Surgery*, and subsequently in remarks on the subject of "Genital Irritation" in the July (1881) number of the same journal. And further, that my expressed doubts regarding the existence of reflex paralysis from genital irritation in childhood, supplemented by the same opinion from my friend Dr. E. C. Seguin, has been confirmed by the very eminent authorities with whom Dr. Gray has been in correspondence.

Very truly yours,

NEWTON M. SHAFFER.

31 WEST THIRTY-SIXTH STREET, NEW YORK,
January 5, 1882.

THE PHENOMENON OF PARTIAL MORPHIA-NARCOSIS.

To the Editor of The Medical Record.

Dear Sir: In your valuable journal of December 31st, I find a short article by Dr. Henry E. Jones, of Portland, Oregon, entitled "A Phenomenon of Partial Morphia-Narcosis." This is "a sensation of numbness of foot or hand, sometimes of one arm, and occasionally of one side of the body."

I take the liberty of addressing you upon this subject, from the fact that Dr Jones has failed to find any written reference to this not uncommon symptom. In my work "Drugs that Enslave," etc., I state at p. 41: "Sensation is variously altered. Sometimes there is a condition of hyperæsthesia, the least touch being intensely painful; the clothing causing decided irritation, occasionally a whole limb or part of a limb, or portions of the trunk or face will feel '*numb or dead.*' Sometimes there are a series of pricking or tickling sensations that are very aggravating, as they and the numbness are often looked upon by patients as precursors of paralysis," etc. This fear of paralysis by some patients, and simulation of it by others, is that to which the doctor calls especial attention. In this place, I referred only to habitual users of morphia, but the same symptoms have been frequently noted in those with whom the drug is only occasionally used. They occur in most marked intensity in those instances where a vein has been punctured and the drug has entered suddenly into the circulation. In these cases, however, other symptoms, as dyspnœa, ringing in the ears, urticaria, palpitation, syncope, and the like, are usually present. For a full consideration of these phenomena, I would refer the doctor to my book, just mentioned, the subject matter spoken of being taken bodily from my first work, "Morphia Hypodermically;" a large number of typical cases are there mentioned.

Unusual rapidity of absorption or individual idiosyncrasy, or both, would undoubtedly lead to the same symptoms, less, however, in degree of intensity, when the drug was taken by the mouth, as when administered hypodermically.

Very respectfully yours,

H. H. Kane, M.D.

Fort Washington, N. Y.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 1, 1882, *to January* 7, 1882.

Tremaine, W. S., Captain and Assistant-Surgeon, now awaiting orders in New York City, to report in person to the Commanding General Department of the East, for assignment to duty. S. O. 2., A. G. O., January 4, 1882.

Powell, J. L., First Lieutenant and Assistant-Surgeon. The seven days' leave of absence granted him in Orders 186, Fort Stockton, Tex., is extended fifteen days. S. O. 159, Department of Texas, December 27, 1881.

Carter, W. F., First Lieutenant and Assistant-Surgeon. The seven days' leave granted him by Orders 195 C. S., Fort Concho, Tex., extended one month, providing he furnish an acceptable substitute during his absence, without expense to the United States. S. O. 160, Department of Texas, December 29, 1881.

Gorgas, William C., First Lieutenant and Assistant-Surgeon. The leave of absence granted him by Par. 5, S. O. 150, Headquarters Department of Texas, December 3, 1881, is extended one month. S. O. 1, Military Division of the Missouri, January 4, 1882.

Maddox, Thomas J. C., First Lieutenant and Assistant-Surgeon, now awaiting orders in Washington, D. C., to report in person to the Commanding General Department of Texas for assignment to duty. S. O. 2, A. G. O., C. S.

U. S. MARINE HOSPITAL SERVICE.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service, October 1, 1881, *to December* 31, 1881.

Hebersmith, Ernest, Surgeon. Relieved from duty at San Francisco, Cal., and placed on waiting orders, November 7, 1881. Relieved from waiting orders, November 26, 1881.

Vansant, John, Surgeon. Granted fourteen days leave of absence, October 18, 1881. To proceed to San Francisco, Cal., and assume charge of the Service at that port, November 8, 1881.

Miller, T. W., Surgeon. Granted leave of absence for seven days, October 6, 1881.

Purviance, George, Surgeon. To proceed to Boston, Mass., and assume charge of the Service at that port, November 8, 1881.

Austin, H. W., Surgeon. To proceed to Galveston, Indianola, Corpus Christi, and Brownsville, Texas, as Inspector, October 17, 1881.

Fisher, J. C., Passed Assistant-Surgeon. To proceed to Yorktown, Va., as Inspector, October 14, 1881. Detailed as member of Board for the Examination of Keepers and Crews of the Life-Saving Service, Third District, November 18, 1881.

Goldsborough, C. B., Passed Assistant Surgeon. Detailed as member of Board for the Examination of Keepers and Crews of the Life-Saving Service, Fifth and Sixth Districts, November 2, 1881.

O'Connor, F. J., Assistant-Surgeon. Granted leave of absence for fifteen days, on account of sickness, December 23, 1881.

Gutéras, John, Assistant Surgeon. Granted leave of absence for ten days, December 5, 1881.

Benson, J. A., Assistant-Surgeon. Granted leave of absence for twenty-one days, December 7 and 21, 1881.

Banks, C. E., Assistant-Surgeon. To assume temporary charge of the Service at San Francisco, Cal., until the arrival of Surgeon Vansant, November 7, 1881.

Carmichael, D. A., Assistant-Surgeon. To proceed to Baltimore, Md., for temporary duty, November 2, 1881. To rejoin his station (New York) and thence proceed to Pittsburg, Pa., and assume charge of the Service at that port, November 18, 1881.

Bennett, B. H., Assistant-Surgeon. To proceed to Boston, Mass., for temporary duty, October 21, 1881.

Peckham, C. T., Assistant-Surgeon. To report for temporary duty to Surgeon-in-Charge, Boston, Mass., October 21, 1881. To proceed to Vineyard Haven, Mass., for temporary duty, November 4, 1881. To rejoin his station (Boston) and thence proceed to New York, reporting for duty to Surgeon-in-Charge, November 9, 1881.

Ames, R. P. M., Assistant-Surgeon. To proceed to St. Louis, Mo., for temporary duty, October 21,

1881. To proceed to Evansville, Ind., for temporary duty, December 24, 1881.

DEVAN, S. C., Assistant Surgeon. To proceed to San Francisco, Cal., for temporary duty, October 21, 1881.

URQUHART, F. M., Assistant Surgeon. To report for temporary duty to Surgeon-in-charge, New York, N. Y., October 21, 1881.

APPOINTMENTS.—The following candidates having passed the examination required by the Regulations, were appointed Assistant Surgeons by the Secretary of the Treasury, October 20, 1881: Philo H. Bennett, M.D., of New York; Cyrus T. Peckham, M.D., of Massachusetts; Robert P. M. Ames, M.D., of Pennsylvania; Spencer C. Devan, M.D., of Missouri; and Francis M. Urquhart, M.D., of New York.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 7, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Dec. 31, 1881.	1	6	335	9	184	152	28	0
Jan. 7, 1882.	0	9	271	6	177	148	39	0

THE RECENT DEATH OF DR. JOHN W. DRAPER has removed a man whom the medical profession has some right to claim as one of them. Dr. Draper was a physiologist, physicist, philosopher, and historian. He had one of those rare minds which combine the power of patient investigation with brilliant generalization. His physiological, as well as his philosophical works, have long been widely read, and will long continue to be both popular and authoritative.

THE HOUSE COMMITTEE ON PUBLIC HEALTH is constituted as follows: Messrs. Van Aernam, Updegraff of Ohio, Bowman, Cullom, Hubbs, Rosecranz, Coleriek, Aiken, King. This committee is last but one on the list—so poorly does our National Legislature esteem the subject.

THE ADJOURNED ANNUAL MEETING OF THE MEDICO-LEGAL SOCIETY was held on January 4th. Two new trustees were elected: Dr. William A. Hammond and Meyer S. Isaacs. A sharp contest took place over the election of the president. Mr. Clark Bell was, however, elected by a considerable majority. The society then adjourned to a supper at the Gilsey House.

The delivery of the valedictory and inaugural addresses was postponed, on account of the supper, until the next monthly meeting. Before the society adjourned, a protest was filed by one of the members, claiming that the election of officers was illegal.

SMALL-POX IN THE UNITED STATES.—Reports received by the National Board of Health to December 17th show that small-pox now prevails to a greater or less extent in sixteen States and two Territories, as follows: In Boston, Holyoke, and New Bedford, Mass.; New York City, N. Y.; Hudson County, N. J.; Philadelphia, Pittsburg, Alleghany, and Midway, Pa.; Wilmington, Del.; Baltimore, Md.; Richmond, Lynchburg, and Winchester, Va.; New Orleans, La. (one case reported); Little Rock, Ark.; Cincinnati, O.; Madison, Ind.; Chicago and Elgin, Ill.; in Antrim, Berrien, Grand Rapids, Leenawa, Travers, and Van Buren Counties, Mich.; St. Louis, Mo.; San Francisco, Cal.; in Oregon and in the Territories of Washington and Montana. The number of deaths from small-pox reported during the week was 105.

DR. ROBERT BARRY died on January 6th, at his residence in this city. He was in his fifty-eighth year. Dr. Barry was a graduate of Williams College, and of the College of Physicians and Surgeons of this city. He was an officer of the Academy of Medicine, Chairman of the Committee on Ethics in the County Medical Society, President of the Physicians' Mutual Aid Association, President of the East River Medical Association, a manager of the Society for the Relief of Widows and Orphans of Medical Men, and a member of the State and National Medical Associations.

SHORTENED DURATION OF HUMAN LIFE IN ENGLAND. —It appears that not only are the heads of Englishmen growing smaller, but their lives are growing shorter. This, at least, is the testimony of Dr. A. Ravagliati, who discusses the subject in the *British Medical Journal*. From a study of statistics, he finds that, laying aside deaths from zymotic diseases, the mortality is now greater than it was thirty years ago. The apparent lengthening of life is to be accounted for by the diminution of zymotic diseases.

CHARITY HOSPITAL, NEW YORK.—At the annual meeting of the Medical Board of Charity Hospital, held at the Academy of Medicine on the 3d instant, the following officers were elected:

President, Dr. Wm T. White; *Vice-President*, Dr. Beverly Robinson; *Secretary*, Dr. Edward S. Peck.

TRAINING PEOPLE TO MEET MEDICAL OR SURGICAL EMERGENCIES.—The State Charities Aid Association proposes to establish a kind of ambulance school for the instruction of police and firemen, general workmen, and railroad employés, and the employés of all public institutions and others who may wish it, how to meet emergencies. The plan is modelled after that of a London society, which has been able to drill many thousands, so that they are now able to supply the place of the physician or surgeon until that important functionary can be summoned and arrive. Lectures will be given weekly. After the lectures examinations will take place, and certificates will be given to such as show themselves possessed of the knowledge that will fit them for this laudable work. In addition to these lectures it is also purposed to give lectures touching important matters relative to maternal duties and home hygiene to women.

A NATIONAL MUSEUM OF HYGIENE.—At the recent meeting of the American Public Health Association, the executive committee presented a report recommending the establishment, at Washington of a National Museum of Hygiene. Dr. Gihon, U.S.N., stated that the Surgeon-General of the Navy had already established such a museum, and that he was authorized to offer it to the free use of this association. A resolution accepting the offer and appointing a committee to confer with and convey the thanks of the association to the Surgeon-General was unanimously adopted.

National Vital Statistics.—At the meeting of the Public Health Association in Savannah, last November, Mr. Erastus Brooks, of New York, offered a resolution to the effect that the United States Congress be requested to take steps to secure co-operation between the Federal and the various State governments to establish a uniform system of registration of births, deaths, and marriages of the people of this country. Adopted.

Misuse of Advertisements.—Some time since we noticed that what was an advertisement in The Medical Record had been quoted in a neighboring journal as an article from one of our contributors. We have since learned that the mistake was due to an oversight on the part of the editor of the *N. E. Monthly Journal*, in which the quotation appeared, and that the advertisers were in no degree directly or indirectly responsible for the appearance of the article in the shape referred to. This statement is due to a firm which, in common with others of our patrons, does not solicit editorial notices.

The Death of Professor Nikolaus Pirogoff is announced. He was, says the *British Medical Journal*, Professor of Surgery to the Medico-Chirurgical Academy of St. Petersburg, and a member of the consulting staff of several hospitals in that city. In 1840 he brought out a valuable treatise on the division of the tendo Achillis in orthopædic surgery. He also wrote on cholera, on the surgery of the arterial trunks, and on the medical aspects of the Caucasus, and on topographical anatomy. His work on this last subject forms a fine atlas of anatomy as illustrated by frozen sections.

It is, however, with military surgery that his name will ever be most closely associated. He is the medical historian of the Crimean and Circassian campaigns. He also wrote a report on the military hospitals in Germany and Alsace-Lorraine during the war of 1870.

Professor Pirogoff's name is made familiar to American and English medical men through its association with his peculiar method of amputating the foot.

Last June he celebrated the fiftieth anniversary of his official life.

Lindsay & Blakiston.—The firm of Lindsay & Blakiston, in Philadelphia, which has continued for nearly forty years past, ceased to exist on the 1st inst. From the first, special attention was given to medical publications, and their stock was probably the largest and most varied of any in the country, after that of Messrs. William Wood & Co. Since 1862 they have confined themselves solely to medical literature, and were the agents of the Messrs. Churchill in America. Mr. Lindsay is still a hale old gentleman, and carries with him, in his retirement from active business cares, the universal respect and goodwill which are his due from a long and honorable mercantile career. Mr. Blakiston has associated with himself his son, Kenneth M., and Frank W. Robinson. They will continue the business of the late firm under the name of P. Blakiston, Son & Co.

The Test of Responsibility, as laid down by Judge Cox in the Guiteau case, is as follows: "The legal test of responsibility, where insanity is set up as a defence for alleged crime, is whether the accused, at the time of committing the act charged, knew the difference between right and wrong in respect of such act. Hence, in the present case, if the jury find that the accused committed the act charged in the indictment, and at the time of the commission of his crime knew what he was doing, and that what he was doing was contrary to the law of the land, he is responsible, unless, in consequence of insane mental delusions, or other form of mental disorder, he was laboring under such defect of reason as to be incapable of understanding the obligation of the law of the land, and the duty and necessity of obedience to it, and of understanding that his act was wrong, because it was in violation of the law."

Hospital Saturday and Sunday.—The collections thus far have amounted to $30,902.42.

Thirty Cysticerci in the Brain of a Girl.—Ronchut relates an interesting case in which at the autopsy of a girl, fourteen years of age, thirty cysticerci were found in the brain of the deceased.

Inhalation of Hydrastin, with Glycerine of Borax and Morphia, in Laryngeal Phthisis.—In laryngeal phthisis, says Dr. Bird (*Australian Medical Journal*), an inhalation, with Siegle's spray, of filtered solution of hydrastin, with glycerine of borax and morphia, gives great temporary relief.

A Phthisical Cavity in the Lung Converted into an Aneurism of the Pulmonary Artery.—At a meeting of the Medical Society of Victoria, a specimen illustrating the conversion of a phthisical cavity into an aneurism of the pulmonary artery was presented; it consisted of the right lung removed from a case of long-standing fibroid phthisis. Near the base was a firm-walled old cavity, the size of a walnut, into which opened a branch of the pulmonary artery of considerable size; the cavity was lined by a thick layer of firm decolorized clot, and communicated freely with a bronchial tube.—*Australian Medical Journal.*

Cremation.—A society for the promotion of cremation has been formed at Padua. A numerously attended meeting was held under the presidency of Dr. Giovanni Berselli. The institution will be known as the "Ferdinando Colletti Cremation Society of Padua."

Flukes in the Human Liver.—During the last five years, Dr. Allen has found flukes in the ducts of the human liver on three occasions. In one case, seven were found; in each of the others, one only. The species was the ordinary distomum hepaticum. Abscess of the liver was present in each instance.—*Australian Medical Journal.*

Doliarina.—This is a crystalline substance, extracted from the ficus doliaria. In Brazil it is regarded as a specific against American chlorosis, a disease due to the ancylostoma duodenale. This creature was constantly found in the fæces of the laborers at St. Gotthard affected with anæmia. Dr. Buzzolo employed all sorts of vermifuges in these cases without effect, and finally availed himself of doliarina, in the shape of a powder, into the composition of which iron and several aromatic vegetable compounds entered. This was administered in doses of a teaspoonful three times a day. Relapse was prevented by taking a small teaspoonful once a day for a month. Dr. Buzzoli tried the remedy in two cases. In one, the first spoonful provoked an abundant diarrhœa, and in the evacuation, six of the entozoa were found; the third spoonful caused the expulsion of eleven more. In the second case, the patient was soon seized with diarrhœa, and passed sixteen of the parasites.—*Gaz. des Hôp. and Gazz. Med. Ital.*, July, 1881.

Original Communications.

THE TREATMENT OF DISEASES OF THE MIDDLE EAR AND CONTIGUOUS PARTS BY MILDER MEASURES THAN THOSE COMMONLY IN VOGUE.*

By SAMUEL SEXTON, M.D.,
NEW YORK.

Mr. President and Fellows of the New York Academy of Medicine: A large number of cases of acute purulent inflammation of the middle ear recover notwithstanding the neglect or the excessive treatment to which they are often subjected. Sometimes, however, the severity of the disease, or its injudicious management, give rise to grave symptoms and complications affecting the mastoid and other contiguous parts; we have then to contend with a condition of things which is highly inimical to the well-being of the patient. In presenting a cursory and much condensed *résumé* of the causes and symptoms which must necessarily precede any views as to the treatment of these affections, I shall avoid many details that would be of special interest only to the otologist. By thus confining the discussion to the consideration of complications that most frequently present themselves to the physician in general practice, I shall hope to obtain more time for the question of treatment—especially such methods of treatment as seem likely to cure the patient, without resorting to the more extreme operative methods that some authorities have hitherto recommended.

The causes of suppurative disease of the ear may be conveniently arranged under three heads, namely: first, those arising from nervous sympathy; second, from an extension of catarrhal inflammation from the naso-pharynx through the Eustachian tube; and third, from mechanical or direct influences. Belonging to the first class are the reflex influences on the ear from other organs of the body and from taking cold; thus, every one is familiar with the phenomena of aural sympathy from irritation of the dental nerves, or of those supplying the naso-pharynx. The ear may also be affected from diseased action in organs even more remote than the mouth or the naso-pharynx; I have thus seen many cases where otalgia could readily be traced to painful conditions in the uterus and ovaries. The ear is also sometimes subject to attacks of an acute nature from the effects of wetting the hair of the head and allowing it to slowly dry, from clipping the hair too closely, and very frequently from exposure of the head and neck to draughts of cold or cooling air.

In the second group of etiological factors, the extension of catarrhal inflammation from the naso-pharynx seems to be directly along the mucous membrane which lines the Eustachian tube; thus, a cold in the head may first affect the naso-pharynx and then travel along the Eustachian tube to the drum of the ear.

To the third group belong the direct effects of the entrance of irritating fluids, either through the external auditory canal or the Eustachian tube, traumatic injuries, and in rare instances the entrance of draughts of cold air into the external auditory canal. The middle ear is thus obnoxious to the entrance of cold water in bathing, or from the use of the nasal douche.

Very often more than one of the causes enumerated exert an influence on the patient at the same time, a strikingly illustrative instance of which occurs to me in this connection. The case was that of a lady, who was said by her physician to have been the subject of some chronic uterine disorder: she was twenty-four years of age, and the left wisdom tooth was erupting with difficulty—in fact it had been the cause of a great amount of local irritation for a year before she was brought to me for treatment. While this uterine trouble and the irritation in the mouth were both going on, she was obliged to make the journey from Europe to New York, and during the passage she contracted a cold in the head, resulting in an acute purulent inflammation of the left middle ear. When I first saw this patient she described the pains as shooting from the teeth to the ears. The remote causes which were active in this case very greatly protracted the recovery. In cases similar to the above, improvement has often immediately followed the removal of the remote causes. The observance of these pains shooting from the teeth to the ears should not lead to the mistake of diagnosing catarrhal inflammation of the Eustachian tubes.

As regards the influence of age and sex on the progress of acute aural catarrh, my experience has been that among adults the more grave cases occur with greater frequency in males, and that, probably, of all of the grave adult cases, both acute and chronic, about one-half were consecutive to acute attacks, while in the other moiety there has been a history of chronic purulent inflammation of the ear. It is a matter of observation that exacerbations occurring in chronic cases are as dangerous as original attacks. In childhood, I am under the impression that females are more liable to the severer forms of aural disease than males.

In reference to the liability of acute aural catarrh to take on a severe form of inflammation, it has been premised that in many instances the attacks are mild at the onset: the secretions of the middle ear are slight in quantity, and may escape through the Eustachian tube, or, where this is not possible, an outlet is afforded through a rupture in the drum-head, which heals up again very rapidly under favorable circumstances, and the patient is soon restored to health. If such a case, however, is treated by violent measures, such as leeching and untimely incisions of any of the tissues about the ear, or by vigorous inflations of the tympanum, it may not prove so simple an affair, but may rapidly take on a severe form of inflammation, and adjacent structures may rapidly become involved. I would not be understood as dogmatically asserting that all cases treated by these measures take such a course, but I am fully convinced that in a large number of instances the case would do better without them, and that in many instances they do much harm. An untoward course is also to be expected in a certain number of cases from the beginning of the attack.

Before commencing an account of the symptoms of the extension of inflammation of the middle ear to contiguous parts, it would be well to make some division of the subject for convenience in description; I shall, therefore, arrange the subject as follows: 1, catarrhal inflammation, caries and necrosis, of the air-cells of the mastoid; 2, periostitis of the external auditory canal; 3, periostitis externa.

* Read before the New York Academy of Medicine, January 5, 1882.

Meningitis, pyæmia, and other results of middle-ear disease, for want of time, cannot be considered.

The symptoms of an invasion of the pneumatic cells of the mastoid, along with or consecutive to acute catarrhal inflammation of the middle ear, are not always distinguishable where hyperæmia of the mucous lining only exists; but when the disease at this stage has not been arrested by the treatment, which is applicable to this region as well as to the middle ear, swelling of the mucous membrane takes place. In the middle ear the swollen mucous membrane now nearly always closes the tympanic orifice of the Eustachian tube, and thus cuts off the escape of secretions in that direction; it also reinforces the drum-head, giving it increased power of resistance. The retained secretions now accumulate in the drum, and probably are in some measure the cause of an extension of the disease to the mucous lining of the air-cells. The intense pain experienced in the ear is only to a slight extent indicative of mastoid inflammation at this stage; but when little relief is experienced on the liberation of the accumulated fluids, either by spontaneous rupture or by the incision of the drum-head, we may surmise that inflammatory action has taken a wider range; and should there now be an excessive discharge from the ear, it may be regarded as pathognomonic of mastoid disease.

Inflammation of the middle ear very often extends to the periosteum of the external auditory canal. The invasion of this region is characterized by a decrease in the size of the inner end of the tube, which is the portion principally affected. The parts have a humid look from an increase of the secretion of the sebaceous glands, and there is usually an exfoliation of the epidermis. This region, being richly supplied with sensitive nerves, is now very painful, and difficulty is experienced in mastication from the pressure of the condyloid process of the inferior maxillary upon the sensitive surface of the glenoid fossa of the temporal bone.

Periostitis externa is very liable to occur when the external auditory canal is affected, the osseous portion of the latter, and the external surface of the temporal bone having a common periostic membrane. It is probably most frequent over the mastoid, but the entire region about the ear is also very often affected, especially the parts in front of the tragus. The subcutaneous connective tissue overlying the periosteum of the temporal bone seems to be exceedingly subject to inflammation and suppuration; this is doubtless owing to the abundance of fat-bearing connective tissue in these regions. The rapid formation of abscesses about the ears of children is familiar to every physician, their enormous size sometimes presenting a most alarming appearance, which fortunately is not always significant of danger. In very young children even slight attacks of catarrhal inflammation of the middle ear may give rise to extensive inflammation of the connective tissue, and the subsequent suppuration may result in the formation of large abscesses, which sometimes eventually extend almost entirely around the auricle, often burrowing very extensively beneath the skin. In periostitis externa the inflammation rather infrequently extends down along the sterno-cleido-mastoid muscle, when other abscesses may form on the side of the neck. The latter is, I believe, an unusual course in childhood.

The auricle seldom becomes very much swollen in these cases, presumably on account of the absence of subcutaneous cellular tissue; the lobule, and the parts about the attachment of the auricle, however, are sometimes considerably inflamed. When pus forms between the periosteum and the cortical substance of the bone, superficial necrosis may ensue. Such a sequence, however, is not always a result. Perforation of the cortex almost always proceeds from caries and necrosis of the mastoid cells.

Treatment may be unsuccessful in arresting the middle-ear inflammation, or the case may not come under observation until the mastoid cells have passed the stage of hyperæmia, and the mucous membrane having become first infiltrated, the contents of the cells soon assume a gelatinous character. It is believed by Schwartze that in these cases the products of inflammation are sometimes prevented from finding an outlet through the mastoid antrum into the tympanic cavity, and thus give rise to conditions requiring operative procedures.

When the mastoid cells become denuded from the inflammatory process, caries results, the products of the morbid action finding an outlet most frequently into the posterior wall of the external auditory canal. As a result of the necrosis, which now frequently occurs, sequestra of various sizes become detached, and may be detected, by the probe, in the diseased cavity of the mastoid. If a free outlet for the secretions is not afforded by the communication with the tympanum or the external auditory canal, a fistulous opening through the mastoid process is formed. Sometimes a large sequestrum presents at the outlet of these drainage-tracts. When they are thus thrown off, improvement of the case is usually rapid. The carious cavity often gives rise to excessive purulent secretion, when small fragments of bone are carried out of the ear without being observed. According to Schwartze, minute sequestræ may disappear very slowly by absorption through the granulations.

Injury of the facial nerve, where it passes through the aquæductus Fallopii, may be caused by necrosis or by the pressure of a sequestrum in transit, in which event a facial paralysis would occur. Slight paresis only may result from such an injury to the nerve, but the possibility of its occurrence should always be kept in mind when treating these cases, for the palsy, when not great, is liable to escape notice.

The result of caries and necrosis of the mastoid air-cells in children would seem to be their entire obliteration in some instances. I have thus seen children where a large cicatrix behind the auricle, lying deeply in the concavity left in the bone, was the result of such destructive inflammation.

Disease of the pneumatic cells of the mastoid may exist when the appearance of the drum-head gives but little evidence of any middle-ear disease; I have observed several instances of this kind. In one of them an acute and painful attack came on, accompanied by Bell's palsy. The mastoid inflammation did not abate for several weeks, and the palsy lasted much longer. There were no marked acoustic phenomena to indicate disturbance of the conductive mechanism in this case, nor was the drum-head more than slightly hyperæmic for a few days. In another case, where the mastoid disease had existed for years, the perforation in the drum-head closed up, and good hearing returned; the purulent secretions from the mastoid, in the meantime, finding an outlet through the outer table.

Caries of the mastoid cells may exist for a long time without recognition. A case of this kind came under my charge quite recently; the patient was a

woman, nineteen years of age, who had been, probably, the subject of chronic purulent inflammation since childhood, although she had no recollection of ever having had any pains in the ear, or any discharge therefrom, until a short time before I first saw her; she stated, however, that the ear had had a bad odor at times ever since she was a child. After the removal of a mass of polypi, a large sequestrum was found at the bottom of the external auditory canal, which, on examination, proved to consist of the mastoid antrum, some of the pneumatic cells, and a portion of the roof of the tympanum. Soon after these morbid products were taken from the ear the patient made a rapid recovery. Facial paralysis, however, remained, owing to an irreparable injury to the facial nerve.

When caries of the mastoid perforates some portion of the external auditory canal, there is at first a characteristic bulging of the integument into the canal, which decreases its calibre; this purplish projection may have only a minute opening at the beginning, and is sometimes mistaken for a tumor or polypus. When attempts are made to remove it with a snare, or to liberate secretions, it is found that it can neither be readily removed, nor can any relief usually be obtained by incisions. Later on, however, the opening usually becomes larger, and is soon the seat of abundant fungoid or polypous growths.

I shall not attempt to discuss here the causes of the extension of aural disease to the brain, or the occurrence of pyæmic infection or thrombi, my chief object being to offer a plan of treatment that in my own experience has been more satisfactory than any other.

The differential diagnosis of the invasions of inflammation of the middle ear to contiguous parts, and the diagnostic value of pain as a symptom, will, when taken into account, do much toward a more rational treatment of aural disease, and I shall, therefore, beg to give the results of my own observations on these points before entering into the subject of treatment.

The diagnosis of simple hyperæmia of the mucous lining of the mastoid air-cells is difficult, the symptoms not always differing from those of middle-ear catarrh; but when the mucous-periosteal lining is attacked, an increase of pain would be experienced by the patient, the attack might be ushered in by chills, the temperature and pulse in severe cases would be characteristic of acute inflammation, and the pains would be non-paroxysmal.

The degree of pain in the mastoid is spoken of by some authorities as being indicative of the gravity of the case; but this, fortunately, is not always confirmed by experience, for the most intense neuralgic pains may exist in any of the parts liable to be affected, independently of mastoid inflammation. We have seen how exceedingly painful some regions of the ear are when inflamed, and every physician knows how difficult it is to locate this symptom. Were pains alone, therefore, always regarded as symptomatic of inflammation in either the mastoid or the brain, we should often be misled, for grave cases are not always so announced. It is important, therefore, to differentiate between sympathetic aural pains and the pains that attend inflammation in these cases. Pains of a severe character, felt to be in the mastoid or in the whole temporal region, may often be traced to irritation of the nerves in the middle ear. A patient under treatment at the present time was for many weeks afflicted by severe pains of this character, but when the middle-ear disease rather suddenly yielded to treatment, with closure of a perforation in the drum-head, the neuralgic pains almost instantly ceased, as if by magic. A similar result has been obtained by the treatment or removal of a diseased tooth. I have no doubt but that the intense neuralgias in the temporal region, depending on sympathetic causes, are capable of producing inflammation in these parts, and this may serve to explain why the subcutaneous cellular tissue about the ear is frequently the seat of suppurative inflammation, even when there is no evidence of the previous existence of periostitis. It is to be feared that, when such phenomena exist during the progress of middle-ear disease, it is too much the habit to consider that extension of the inflammation to the brain itself is threatened. The brain may be affected, or pyæmia or thrombi may be developed from aural disease, without any severe local affection in which pain is a prominent symptom.

The absence of acoustic phenomena usually experienced in middle-ear disease would have some weight in the location of inflammation of contiguous parts. Inasmuch as acute, purulent inflammation of the middle ear is well known to be liable to extend to contiguous parts, it is well to endeavor at the outset to prevent, if possible, the occurrence of the more grave complications which may thus imperil the patient. I have ventured, at the beginning, to predict that in many instances the disease would take a more favorable course from milder treatment than that commonly in vogue; but, unfortunately, few cases that come under our observation have been allowed to pursue their regular course without some attempts having been made for their relief; thus, it is commonly believed that syringing the ear can do no harm under any circumstances, and poulticing is also sometimes resorted to from a like conviction. Syringing, indeed, is a procedure that, if left to the uninstructed nurse, very often consists in merely douching the external parts of the organ; but, when done energetically by one who succeeds in violently introducing a stream of water into the external auditory canal, much damage is liable to be accomplished, either by direct injury to the drum-head, or, if water should enter the tympanum through a perforation, the irritation already existing may be increased. Should leeches now be applied, the possible relief from the depletion may be more than counterbalanced by the irritation of their sharp bite and the bungling attempts made in stopping the bleeding after they drop off; the large coagula entangled in pellets of cotton-wool used to arrest hemorrhage are also liable to irritate the parts, especially in children. Blistering and painting with the tincture of iodine over the mastoid, or in front of the ear, as is the practice of some, are also not without their evil effects; and the instillation of astringent solutions are often even yet more injurious when successfully introduced. Should inflation of the tympanum, either by the air-bag or by the Valsalvan method, be now accomplished, the forcible entrance of air may be not only painful, but also harmful. The two procedures last mentioned, often employed to improve the hearing in chronic cases, are of doubtful value in acute inflammation of the middle ear, for we are not warranted in further distending that cavity by forcing in more air and mucus. At a later stage of the attack we may, of course, avail of these pneumatic methods, in occasionally driving the accumulations of the tympanum out through the perforated drum-head. The proce-

dures enumerated above may transform a simple acute catarrhal inflammation of the middle ear into one of more or less severity, or at least very much protract the disease.

In starting out some years ago to endeavor to manage these cases by milder methods of treatment than seemed to generally prevail, I must confess that my greatest encouragement came from a most unexpected source, namely, the neglect of some patients to carry out the plan of treatment I had thought best to recommend. In some instances it was the neglect to apply leeches to the ear; in others the inability to efficaciously syringe the ear or instil into it the astringent solutions ordered. The instance, however, that influenced me more than any other, was the refusal of a patient, suffering from a large and painful swelling over the mastoid, to have Wilde's operation of cutting down to the bone performed; the patient, dreading the pain of the proposed incision, absented himself for a week, during which time he continued to take the calcium sulphide which had been prescribed. I fully expected that he would return with an abscess in an advanced state of maturation, but, much to my surprise, his condition had very much improved, and the pain and swelling over the mastoid had almost disappeared.

The desire to rebuke this person for the irreverence thus manifested toward the accepted doctrines of the aural profession gave way, on reflection, to the thought that perhaps he was rather to be congratulated in having escaped the painful experience of routine treatment.

These and other seemingly good and sufficient reasons led to the conviction that certain well-established practices in the management of aural diseases could with advantage be much modified; and experience has, in the meantime, brought forward general or constitutional remedies which appear in great measure to supersede the more radical and severe local means to which reference has been made.

It will be disputed by none that absolute rest is indicated in the early stage of acute middle-ear disease, but I would supplement this with the injunction to maintain rest of the ear itself; in other words, the inflamed organ should be but little disturbed by local applications. If the patient is seen before a discharge from the ear has begun, the drum-head should be carefully inspected through a speculum by the aid of light reflected from a head-mirror; if it should be found to be inflamed, but not greatly bulged out by the pressure of secretions, it should not be subjected to any local treatment whatever; but if thickened, and therefore more resisting, as it may be from serous infiltration of the mucous coat, or from previous inflammation, and violently distended, the question of paracentesis will present itself. My own practice in the management of cases presenting this problem has been to give the patient the benefit of the doubt, when any exists, and the result of this course has been that, on the whole, I have not regretted the postponement of the operation. It is well known that the drum-head very often gives way when not streagthened in the manner above described, without any one being conscious of the fact before a serous discharge appears.

The performance of paracentesis is not always an easy operation, even in adults; in weak or susceptible persons, and especially in children, an anæsthetic is, as a rule, required. I am not in the habit, moreover, of perforating the membrane without obtaining a good view of its condition, for when swelling of the inner end of the external auditory canal prevents an inspection being made, we are warranted in concluding that the pain and other urgent symptoms may depend on the inflammation of the periosteal coat of the canal.

When the contents of the tympanum have escaped, either from bursting or incision of the drum-head, the syringe should not, as a rule, be employed, but the discharge may be gently wiped away by means of absorbent cotton-wool wound into a brush on the end of a vulcanite probe; the meatus should not be kept greatly obstructed by pellets of cotton-wool, as they prevent drainage and the proper ventilation of the parts; they are admissible, however, when the patient leaves the house.

In the meantime, attention to remote influences is demanded, for local treatment will be unavailing so long as these causes remain active. Should it be found that either dental caries, or the difficult eruption of teeth, give rise to reflex irritation in the ear, these causative factors should be, if possible, eliminated by treatment; if naso-pharyngeal catarrh be also present, it must receive attention. In many cases it will be found that disorders in regions even more remote than these, as of the uterus and its appendages, exert a decided influence on the ear, and when this is the case the condition of such organs should not be overlooked. When, later on, muco-purulent secretions are retained in the external auditory canal, because of their viscidity, they may not be easily removed by the wiping process, and gentle syringing with water, as hot as can be easily borne, is then required; unless such collections are removed, their decomposition, especially in warm weather, is to be apprehended. If heating agents seem indicated for the relief of pain, or to counteract vascular tension, I prefer either hot vapor or hot air to meet these indications. In these acute cases, where discharge is slight, the boracic acid with calendula is sometimes most efficacious; it is applied in the dry state, a small quantity being introduced and allowed to remain in contact with the drum-head until carried out by the discharge, when, if it does not prove irritating—which is seldom the case—it may again be applied as before. When excessive discharge exists, the remedy is still of service, but the result is, of course, not so satisfactory. In my own experience in the use of this preparation, its healing effect has been very well shown in nearly all of the cases where it was employed.

These measures are, in many instances, sufficient to cure the case in a week's time, or even in a few days, when no important complications exist.

In by far the greater number of cases, however, the conditions are not favorable to so quick a recovery as might be inferred from the above, and constitutional treatment will be required. Where there are any reasons for apprehending that the case may be other than unusually light, general treatment may be commenced at the onset. I shall not allude here to those hygienic and rational methods which every experienced practitioner has learned the value of in the management of any case where inflammation is a symptom, but there are some remedies, which have not been as yet generally adopted in the treatment of aural inflammation, that have proved in my hands to be of great value; one of the most important of these is the calx sulphurata or sulphuretted lime. When I first employed this drug—some six years ago—its use was

confined mainly to furunculous and diffuse inflammations of the external auditory canal, and the results then obtained were so gratifying that I ventured to present them to the profession in a paper published in the *American Journal of Otology* for January, 1879. The virtues then claimed for this remedy, in a rather restricted field of employment, have been not only confirmed during the three years that have now elapsed, but subsequent experience, in both private and infirmary practice, has also demonstrated its value in most of the acute inflammations of the middle ear and contiguous parts. In this somewhat extensive experience, I have found this remedy to exert a more favorable influence over acute aural inflammations than hitherto obtained by any other treatment. This drug seems to possess, according to Ringer, "the property of preventing and arresting suppuration." Thus, in the inflammation threatening to end in suppuration, it reduces the inflammation and averts the formation of pus. It then hastens maturation considerably, whilst at the same time it diminishes and circumscribes the inflammation. The therapeutical action of this medicine cannot be fully explained, but in speaking of it as producing different and apparently opposite effects, as the dispersion of inflammation in one case and the expulsion of pus in another, Ringer likens it to poultices and hot fomentations, which both subdue inflammation and prevent suppuration, and in other cases considerably hasten the maturation of abscesses. My experience fully confirms all that is thus claimed for this drug, and I might add that, whenever its favorable effects are obtained, there is a marked abatement of pain—an important result where this symptom usually plays so great a part.

As regards the special indications for the employment of this remedy, and the dosage, I would say that whenever there is acute inflammation, with or without suppuration, I would recommend its employment.[1] Its continuance must depend on the effect produced, the length of time depending on conditions that differ in different cases; this, of course, is easily regulated by the physician when the indications for its use are fully understood. I give it in one-half grain doses, repeated every three or four hours, and I have seldom found that the above dose needed to be increased. A smaller dose is sometimes preferable, especially in children. I prefer to use this drug in the form of gelatine-coated pills, unless it is desirable to not administer a pill, or when smaller doses are indicated; for these purposes the triturations of "hepar sulphur." of the homœopaths are satisfactory.

So certain am I of the action of this drug in inflammation, that I have not found it necessary for several years past to resort to leeching in any case, however severe, and I am scarcely ever obliged to use the knife for the relief of inflamed tissues anywhere about the ear. When large collections of pus have already formed in the subcutaneous tissue, it is of course nearly always necessary to lance them promptly; but when the periosteum of the mastoid process, or of other regions near the ear, becomes inflamed, and pus threatens to form beneath it, I regard the usual operation of cutting down to the bone for the relief of this condition, before giving the drug a fair trial, as not only unnecessary for the cure, but also as a cruel infliction on the patient, and likely in many instances to very much aggravate the case. I have usually found that the early administration of the calcium sulphide or the hepar sulphur. in these cases very promptly relieves the symptoms, which are usually thought to require the use of the knife.

Sometimes the pains accompanying the acute aural affections under discussion are so severe that the patient's strength rapidly yields to their depressing influence; even when inflammation seems to yield to the calcium sulphide, there may still remain very severe pains in and about the ear; these pains are not always constant; they are worse at night, and seem best borne when the patient is sitting up or walking about; there are intervals of immunity, during which the patient experiences occasional "darts" of pain in the ear, or behind the mastoid in the region supplied by the occipitalis minor nerve. In the treatment of this symptom I do not think the best course always is to benumb the whole system for the relief of the local pain. Paradoxical as it may seem, large doses of morphia or quinine, both of which drugs I have seen given freely in these cases, seem at times to increase the discomfort. Should any remote influence keep up the pain in the ear through sympathy of the nerves, or should the patient be subject to facial neuralgia, these factors must be weighed, and any particular cause, if possible, should be removed. For these pains there are several remedies that I always try before resorting to the profound narcotics, which, when employed extensively, are known to interfere with nutrition; I allude to aconite, pulsatilla, and gelseminum. These may be employed in varying quantities, from a drop of the tincture down to a minute portion of that dose, given every few minutes or every few hours, according to the age of the patient and the urgency of the symptoms. The pulsatilla seems best indicated in the acute aural attacks of children, while of the other two remedies it may be said that, while their action seems to be somewhat similar, yet in some cases it will be advantageous to try both of them, giving one a fair trial before resorting to the other.

When the periosteum of the inner extremity of the external auditory canal becomes inflamed from an extension of the disease of the middle ear, a more prolonged treatment by the calcium sulphide must be persisted in, and, inasmuch as this region contains but little connective tissue, I would not advise cutting down upon the integument, for pus is scarcely ever found; besides, the operation is extremely painful.

When inflammation extends from the middle ear to the pneumatic cells of the mastoid, the effect of the sulphide of calcium is most beneficial, and, when properly administered, the gelatinous collections spoken of by some authorities as very often indicating the use of the trephine have not, in my experience, given rise to serious consequences. In a very considerable experience in the treatment of several aural disease with this drug, I have never had to employ the trephine, nor have I ever seen any results that gave rise to a feeling of regret that this radical procedure had been avoided.

I may here suggest that pirostitis externa, when attended with much pain, sometimes subjects the patient to unnecessarily severe treatment—to operations which neither always relieve the pains or prevent brain-trouble when actually impending. The existence of pain is certainly not a sufficient indication *per se* for resorting to the operation of trephining the mastoid process, for it is by no means pathognomonic of danger to the brain. Could we determine when inflammatory products in the mas-

toid were liable to become dangerous to life when not liberated, we could readily enough secure their escape by establishing an outlet through the cortical substance of the bone by means of the trephine. The results of this operation are sometimes by no means as harmless as its easy performance would indicate, for fatal results are not at all uncommon, and we may in any case convert a simple catarrhal inflammation of the pneumatic cells into a most troublesome ostitis. Inasmuch as the danger of cerebral complications does not necessarily arise from the pressure of pent-up secretions, but rather from transmission by contiguity, trephining cannot always, even when pus is liberated, be relied on to prevent their occurrence, however early it may be performed. In acute otitis media the mastoid region may be greatly swollen externally; there may be much pain, and yet an extension of the middle-ear inflammation to the dura mater may take place, while the mastoid cells remain comparatively free of any complication; under such circumstances, if pain and swelling of the peri-mastoid tissues were to be taken as indicating the necessity for trephining the mastoid, we should then have, were the operation performed, a serious wound of this bone added to the other grave conditions that attend inflammation of the meninges of the brain. I cannot but believe, viewing the matter in this light, that the operation has been needlessly performed in a great many instances. It is stated by most authorities that this operation is usually followed by the relief of the urgent and threatening symptoms, together with the pain. It is difficult to understand how this can be, especially in cases where cerebral disease arises from direct transmission from the middle ear and the communicating mastoid antrum, or from previous absorption from the mastoid itself; and when neuralgic pains have their origin in other parts, relief from this operation is likewise improbable.

It may be expected, perhaps, that I should state under what circumstances I would regard this operation as necessary. Without desiring to be understood as considering it always an inadmissible procedure, I may say, that since adopting these measures, no necessity for considering its advantages has arisen in my own practice.

When inflammation of the mastoid cells has passed to the stage of caries and necrosis, the spontaneous escape of the products of inflammation may be expected to take place either through the tympanum, the posterior wall of the external auditory canal, or the cortical substance of the mastoid process. As previously stated, necrosis of the mastoid cells is a sequence of disease of the mucous periosteal lining of the cells, and seldom, if ever, arises from periostitis externa. It is important in caries of the mastoid cells to maintain an uninterrupted flow of the secretions; the outlet, if into the tympanum or the external auditory canal, should be kept free of granulations and polypous growths. Any loose sequestra that present near the orifice of either the cortex of the mastoid, or in the external auditory canal, should be removed and the canal should be kept clean. Hollow cotton-wool dilating tents, which do not interfere with the drainage of the parts, are available when the canal is narrowed. I have found, in cases where an outlet existed in both directions, closure of the sinus leading outwardly through the cortex of the mastoid could very often be advantageously brought about by the use of compresses, while the discharge through the external auditory canal is kept free. When all separated sequestra have been removed, the sinus being dilated, or enlarged by incisions if necessary, and fragments of bone extracted with forceps, the recovery of these cases is sometimes very rapid. When the subject of caries and necrosis is run down or has same dyscrasia, the general treatment becomes of the utmost importance; in these cases the calcium sulphide proves of service, especially in the caries of scrofulous subjects. The trephine or gouge have their uses in some of these cases where it is necessary to enlarge the sinus in order to gain access to pathological cavities for the liberation of sequestra.

Before sequestra have been fully separated, the removal of carious bone cannot always be accomplished without doing violence to healthy structures, especially when we are unable to distinguish between dead and living structures; healthy bone may in this manner be removed, and, by thus setting up ostitis, an extension of the disease may be brought about. When the posterior bony wall and periosteum of the external auditory canal have been perforated in caries, sequestra presenting in this locality can very readily be removed by gentle manipulation; sometimes, however, the integument requires dilatation. It is usually necessary to first bring away the abundant granular tissue which nearly always obstructs the canal, as well as fills any cavities in the mastoid. The point of perforation in the young is often very near the outlet, where the surgeon can easily see what he is doing. Where no loose sequestra are found, the case had best be left to the efforts of nature so far as its surgical aspect is concerned, as minute portions of necrotic tissue rapidly pass out when the channel is clear, while a certain quantity is absorbed. In some instances I have reason to believe that sequestra become encysted; of this, however, I can offer no absolute proof.

SOME POINTS IN THE STUDY OF INSANITY, DEVELOPED BY THE GUITEAU TRIAL.

By HORATIO R. BIGELOW, M.D.,
WASHINGTON, D. C.

THERE is something stupendous in the iconoclasm of modern materialism. Equally stupendous are the scientific vagaries of an agnosticism, that is sceptic of all else but Ego, and is nihilistic in its utilitarianism. The agnostic sees in himself, in the finite personality of the individual, a limitless possibility for the solution of all things. For him there is no pale beyond which man may not tread. Facts do not exist—they are empty fashionings of imagination, to be ove rturned at any time by judicious scepticism. He refuses to accept anything beyond the boundary of his fallible reason. Yet, with a charming insouciance, he seeks to reconcile most inharmonious factors of life, and, in the effort, raises mysteries and stumbling-blocks, which he himself cannot explain, and which fairly shame the most astounding dogmas of the theologians. Of immaterial force we can form no conception that is not objective. Of the primary causes, producing abnormal outcome of this immaterial force, we have only hypothetical and untrustworthy knowledge. To reconcile a material, tangible, substantial brain with an immaterial psyche, or mind, is the herculean tasks which modern experts in insanity have as-

sumed. That the question of individual responsibility is still in a most chaotic condition is apparent from the testimony adduced in the Guiteau trial. The cherished theories of only half a decade of years ago are ruthlessly overturned, and no substantial or lasting ones erected in their places. A man of straw is set up to explain phenomena which, in the present state of science, are beyond the realm of legitimate inquiry. We know absolutely nothing of the interchanging chemico-molecular action of the brain. Neither have we ever approached a just apprehension of the various mental states which such reaction is supposed to occasion. All metaphysical introspections of subjective states of consciousness are mere hypotheses that vary with the individual idiosyncrasy. No one can think honestly who is conscious of thinking. Post-mortem examinations give us no pathological changes in the brain in many patients dying insane. There are no tests known to science, chemical, microscopical, or spectroscopic, that may determine, in a large percentage of such cases, just what cerebral changes have taken place. Materialism holds that brain and mind are coeval, coexisting factors of life—that with the death of one there is annihilation of the other—and yet it fails to satisfy us of the peculiar nature of the brain lesion which gives rise to the distorted fancies of many maniacs. Why believe the one and deny the other? Confessing our lamentable and utter ignorance of brain action, it is wise to hold to the old creed that the brain is simply the material organ attuned by immaterial forces. Thus believing, we find an easy solution of many questions which materialism befogs itself and its listeners in trying to unravel. If the organ and its outcome are both material, we are surrounded by greater mysteries and larger difficulties than ever before. We have been told very recently that there is no such thing as inherited insanity, that moral insanity is only another name for depravity, and that specific brain lesion always accompanies the insane diathesis.

A few years ago some of the ablest writers on the special subject of insanity, both at home and abroad, defended with much ability the existence of moral insanity, and it found its appropriate place in the nomenclature of the neuroses. At that time most experts claimed for it a recognized existence, and even now there are many practitioners who can account for certain phenomena upon no other assumption. Apart from any transmitted taint of heredity, we are the product of association, and of the conditions of society in which we are placed. Depravity or crime, viewed in the light of culture, Christianity, and education, bears quite a different aspect when seen by eyes that have never known these elevating and refining outcomes of civilization.

The depravity of the ignorant boor, born in the slums and amid the dregs of society, whose associates from the cradle to manhood have been vile and criminal, whose parents were ignorant of virtue, and whose knowledge of the higher aims of life amounts to nothing, is the result of birth and association. But when a gentleman of position, whose successive gradations from infancy to manhood have been watched by zealous, loving, and honorable eyes, whose relations have been refined and elevating, who has been taught to discriminate between good and evil, and whose business successes, founded upon honest dealing, have proved to him that "honesty is the best policy"—when such a one, without warning or intimation, suddenly breaks out into violent and uncontrollable vice, it is insanity, and not depravity. Yet such admission does not carry with it any immunity of law for the commission of a criminal act. It is not at all improbable or impossible that there may be moral obloquy with intellectual soundness. The moral and the intellectual depend upon different processes. Of the intellectual we are slowly learning from physiology, but much of the actual conditions engendering perception, conception, and will we can never know. Of the birth, growth, and life of morality we know absolutely nothing. A man may have a high sense of honor in regard to certain decrees of the moral code, and be recreant to all the others, and this without any degeneration of intellect. Because of our inability to locate the pathological change, shall we refuse to recognize certain phenomena as characteristic of insanity which we admit in those cases wherein the abnormal process has been made out? It is because the intellectual faculties are not radically disturbed that moral lunatics are responsible in the eyes of the law. If the intent of the law is preventive of crime and preservative of morality, then are all men, sane or insane, equally responsible. Cases are of record in which the intellect has been deranged in one single division only out of its manifold manifestations; and it is not rare to find one deranged as to intellect, yet sane in matters of morality. The converse is equally true. The entire moral outcome may be faulty, and the intellectual differentiation between right and wrong *faultless*. Morbid impulses, which are the underlying principles of these conditions of mental erythism, are very frequently of this nature. It is perfectly possible for one of neurotic temperament, with predisposition to mental instability, to realize the enormity of a vicious action, and yet to feel incapable of resisting the impulse that drives him on. Until science shall enlighten us further, I cannot see how we can escape the separative and distinctive terminology of ignorance, depravity, and moral insanity. Assuming that there are factors at work in the production of insanity which pathology has failed to locate, and whose action is not demonstrable, the argument is purely tentative which defines mental disease as an evidence of cerebral lesion. This is a mere material hypothesis, which has not even the balance of proof in its favor. It is founded upon two finite premises: 1st. With brain developed we have an outcome—mind. 2d. With an undeveloped brain, and at death, mind ceases to exist. The fallacy is apparent. A force once originated is never lost. An immaterial agency, of which we can form only speculative deductions, can manifest itself only imperfectly through a badly arranged medium, and cannot work at all if the medium does not exist. Consciousness has no physical counterpart in cerebral action. We cannot define or locate its creative seat, and we are in perfect ignorance of any molecular action originating it. Evolution signally fails to span the abyss between amorphous matter and a potential molecule—between an inert atom and sentience. Sentience could hardly evolve itself, unless it be granted that sentient molecules have always been, and were the primary factors of conscious creations. The vital creative act from amorphous protoplasm to sentience is beyond the logic of the evolutionist. Does potentiality exist in the cerebral molecule? If so, what are its special characteristics, its chemical reactions, and its microscopic appearance? How does the potential molecule of the brain differ from the inert molecule in other parts of the body? Is consciousness the result of molecular reaction? If so,

what is the nature of the reaction? What appearance does the molecule assume in cases of disease? To assert that all cases of insanity depend upon brain lesion is a mere empty bandying of terms, when the lesion cannot be found, is demonstrated.

A REMARKABLE GUNSHOT WOUND OF THE ABDOMEN, WITH RECOVERY.

By J. A. RAFTER, M.D.,
WHITING, KANSAS.

On the evening of October 12, 1881, I was summoned to see I. S——, a boy about fifteen years of age, who had been shot in the abdomen with a shot-gun. At the time it was discharged, the muzzle of the gun was about a foot from the boy's body. When I reached him he was almost in a state of collapse. The shock to his nervous system was, of course, intense. There had been at first excessive hemorrhage, but it had ceased before my arrival. He had fallen to the ground and vomited immediately after being wounded. On examining the wound, I found that the charge had entered the abdomen two and one-half inches to the left and two inches below the umbilicus, making a terrible-looking opening, nine and one-half inches in circumference, tearing away the abdominal muscles to that extent, and leaving his intestines exposed and powder-burnt, and the intestinal liquid was plainly to be seen oozing from them at several points.

On turning him over, I found that the charge had passed through him, shattering the ilium, and coming out at a slightly lower level than it had entered, and a trifle nearer the lateral aspect of the body. The posterior wound was the smaller; its lips were protruding and lacerated, due to the lodgement of gun-wadding, pieces of coat, vest, pantaloons, and shirt, which had been driven through him. I removed all these, together with several pieces of bone. When I again examined the anterior wound, I found that considerable fecal gas and fluid had escaped from it. I called the attention of several gentlemen who were present to this occurrence, and they were all certain that the escaped fluid had the characteristic odor of fæces, a fact of which I am also positive. Carefully cleaning away all foreign particles, and covering the wound with antiseptic dressings, I brought the patient fully under the influence of opium, by giving laudanum in divided doses, combined with whiskey. After informing the parents that the intestines were lacerated and recovery improbable, I directed them to summon the coroner that he might take such steps in the case as he deemed expedient, as the shooting had been done by an elder brother. The next morning I met the coroner, Dr. Scott (a most excellent surgeon), in consultation. He considered the case hopeless, for, although the boy had rallied considerably from the shock, his bowels were at this time very tender, marked tympanitis being present. The left testicle was also swollen and tender.

The treatment ordered was nutritious diet, all the milk and brandy the patient's stomach would bear, and opium enough to check all peristaltic action, and keep him perfectly quiet; and, as his hygienic surroundings were bad in the extreme, his father's house being situated in the timber, on the bank of Straight Creek—a stream notoriously malarial—I directed him to be given quinine and salicylic acid, three-grain doses once in two hours, and his wounds to be dressed as often with antiseptic cotton and carbolized oil. At my next visit, October 14th, I found the tenderness and tympanic resonance had partly disappeared. The boy was unable, however, to pass his urine; I was compelled to draw it with a catheter, as I also did for several days thereafter, till I deemed it prudent to incorporate sp. nit. ether with the laudanum, when this trouble entirely disappeared. At subsequent visits, October 15th, 16th, 17th, there was no material change in my patient's condition. The abdominal tenderness had entirely disappeared. On the 18th of October I noticed that pus was beginning to form, and at this time the general appearance of both wounds was most unpromising.

There was nothing to note on the 19th and 20th, except that the boy was growing weaker, and pus was forming in more abundance. The discharge from the posterior wound was not great, and was sanious in character. That the wound was not discharging as much as was generated was plain. This was due to the obstruction by the intestines of the shot-tract.

The boy's temperature began to rise, reaching 102¾° F., pulse corresponding to temperature. The discharge from the posterior wound became more profuse as time passed, but pressure on the abdomen in the vicinity of the anterior opening would cause extremely ichorous pus to well forth in great abundance. Something had to be done to drain away the fast accumulating discharge, or my patient's life would pay the forfeit. I resolved to make an effort to drain the wound. I introduced a gum elastic catheter into the posterior wound, and, after considerable difficulty, succeeded in getting a communication between the posterior and anterior wounds. I then attached to the catheter a perforated rubber tube, and carefully drew it through the body. The pus at once began to discharge freely, and for the first half-hour after the insertion of the tube fully a tablespoonful of matter escaped. After this time his temperature became lower. The wound drained very nicely, discharging a large quantity of pus.

Up to this time no action from the bowels had taken place. I ordered an injection, but with negative results. It was repeated on the following day, when a large quantity of fæces was expelled. I at once, and in the presence of several intelligent gentlemen, examined the discharge, and found, as I expected, a number of shot, which were preserved by one of the gentlemen present and myself. They are ordinary bird-shot No. 3.

I do not wish to detail the subsequent progression of this remarkable case. Suffice it to say its history was one of improvement. The treatment given was followed, with what alterations I deemed prudent. The opium was discontinued after the first ten or twelve days. Stimulants were used freely; milk and nutritious diet crowded. Pieces of bone became detached and removed from time to time. As long as much discharge continued, the drainage was used as a sort of safety-valve. The boy has now so far recovered as to be about the house; the wound has nearly healed. His left leg is yet weaker than the right, but he walks without difficulty, and I anticipate a complete recovery.

DEATHS FROM ELECTRICITY.—Several deaths from electricity have now been reported. They were caused by accidental collision with the conducting wires supplying electric lights.

DEATH FROM GELSEMIUM, PRESCRIBED BY AN EMPIRIC.

By A. L. HALL, M.D.,

FAIRHAVEN, N. Y.

To the history of the following case is attached a double significance, illustrating, as it does, the lethal effects of a drug the action of which, until the recent investigations of Bartholow, was imperfectly understood—also as teaching most forcibly the necessity of a strict enforcement of all requirements pertaining to the practice of medicine.

On Thursday, December 22, 1881, at 7 A.M., was called to see Mrs. C——, a strong, robust lady, aged 35 years. The messenger bade me come quickly, as she was dying. Arriving as speedily as possible, I found my services of no avail, she having breathed her last as I entered the room. On examination, I noted the following: General appearance life-like; skin moist; body warm, with slight coldness of the extremities; drooping of eyelids; relaxation of the lower jaw; the mouth presenting an oval appearance. On raising the eyelids, the pupils were found widely dilated, as much as the most liberal application of atropia is capable of producing. (The reader of this may incline to criticise the above as being simply death changes common to and occurring in all cases of death, of whatever cause; but from such an opinion I dissent, as the cadaveric expression rapidly supervened, and as the above conditions make the complement to a class of symptoms obtained from the friends.)

Deceased had acute bronchitis, for which, the first week, no treatment was adopted. Gradually becoming worse, the services of a quack, on the Tuesday evening preceding, were called into requisition, his last visit being about twelve hours before death. At this time he stated to the friends that "her bronchial tubes were badly inflamed," and he should have to prescribe "more powerful medicines," the administration of which at first produced a soothing effect. Later in the night, the patient complained of a "strange feeling;" had double vision; respirations were labored, and general muscular weakness was noted. Notwithstanding she grew rapidly worse, the medicine was continued every third hour, and at about 6 A.M., against her wishes, the last powder was given. Soon after, her husband found her in what he termed a "fit without spasms," incapable of movement or speech, and the respirations labored and shallow. At this point medical assistance was again sought; the prescriber of "more powerful medicine" preferring to lie in bed rather than respond to early calls, I was summoned, as before related.

Classically arranging the foregoing symptoms, we have: drooping of the eyelids, double vision, widely dilated pupils, respirations labored and shallow, relaxation of the lower jaw, oval appearance of the mouth, loss of speech, great muscular weakness, and free perspiration. To which add a feeble and weakened heart's action, and all the characteristic symtoms of gelsemium-poisoning are present.

Procuring one of the powders, and subjecting it to a qualitative analysis, it readily responded to the tests for gelsemium. From gross appearances, I estimated the quantity in each powder at two grains of *gelsemium* and eight grains of cinchonidia sulphas, the former article as prepared by Parke, Davis & Co., of Detroit. Upon their labels of the above article is written: "Dose—One-fourth of a grain, to be gradually increased." But this empiric, imbued with the usual spirit of liberality common to his class, has, for the benefit of suffering humanity, in this and three other cases, generously prescribed, as the initial dose, two grains, to be repeated every three hours, with results which, but for the timely good sense of his patients, would have been as disastrous as in the present instance. In all of these, decided and alarming symptoms followed the administration, such as diplopia, ptosis, dilated pupils, muscular weakness, and labored respirations. The amount taken was ascertained to be respectively two, three, and four grains, in the above cases, and about eight grains in the one whose history is given.

The friends of his victim, fully believing that death resulted from the administration of the medicine, are deterred from prosecution through fear of the body having to be exhumed, in order to obtain positive evidence sufficient to convict him. In conclusion, I would express a hope of reporting, at no distant day, that active measures have been undertaken for the punishment and repression of the dispenser of "*more powerful medicine*," also the result of such action.

A CASE OF PROFOUND URÆMIC POISONING IN AN INFANT, DUE TO AN ELONGATED AND CONTRACTED PREPUCE.

By CHARLES A. HART, M.D.,

SURGEON-IN-CHIEF MUHLENBERG HOSPITAL, PLAINFIELD, N. J.

O. H. F——, born in Plainfield, December 14, 1881, of average size but poorly nourished, weighing only four pounds. All the natural functions were properly performed, except he was a little slow in urinating; an examination showed a long prepuce with an exceedingly small orifice. Circumcision was determined upon, but deferred until the mother had rallied from her confinement.

Everything progressed favorably until December 22d, eight days after birth, when I was hastily summoned to see the child. Being some distance away I did not reach the case until midnight, when the following conditions were found: pupils widely dilated, skin suffused; pulse small and thready; profound stupor. The mother stated that the child had been in the above condition all day, refusing to nurse or be roused. The urine had not been voided since the night before. Palpation of the abdomen revealed the bladder distended above the umbilicus. The act of percussion caused the child to void fully six ounces of urine. Circumcision was immediately performed. Dense glandulo-preputial adhesions were found and broken up. The preputial orifice was a mere pin-hole. In a few hours the child began to nurse and evince more vitality. The bladder was paralyzed from over-distention, and did not regain contractile power for two days, it being emptied by pressure over the pubes. All symptoms of uræmic disturbance completely disappeared in about two days; since then everything has been satisfactory.

The above case is the second of the same type which has come under my notice. The first was about four years ago, in a child three years of age; full uræmic symptoms existed, and convulsions had been occurring for several hours. Death took place in less than thirty minutes from the time I entered the house. He had a long, tight foreskin, and his mother stated that he had always been troubled in making his water. He had been medicated for va-

rious maladies, some of them, evidently, of a nervous character.

The explanation of the symptoms in the first case is entirely mechanical. The urine backed up from the bladder, compressed the kidneys, and without relief would undoubtedly have resulted in death.

I am convinced that like conditions occur more frequently than is suspected by the profession, and many cases of infantile convulsions and nervous maladies will be found to depend upon preputial abnormalities. For years I have given this subject close study and observation, and am surprised at the number and diversity of nervous troubles arising from this source. A practical point in the care of cases of glandulo-preputial adhesions is, after their destruction, the observance of particular care in the daily retraction of the foreskin and rigid cleanliness. A neglect of this for a few days, sometimes a few hours, will result in the reformation of adhesions and return of reflex symptoms.

Reports of Hospitals.

COOK COUNTY HOSPITAL, CHICAGO.

CURIOUS SITUATION OF ANEURISM OF THORACIC AORTA —AN INTERESTING AUSCULTATORY SIGN.

(Reported by DR. G. F. BRADLEY.)

ALBERT F —, aged thirty-six, a laborer, was admitted March 1, 1880. He had a strong constitution, and with the exception of typhoid fever when a youth, had always enjoyed excellent health. His history records that gonorrhœa, one year ago, has been his only venereal trouble. During the past few years has led a roving life in the Western wilds; has undergone many hardships. He noticed no signs of failing health until four months ago, when he began complaining of hoarseness, substernal and laryngeal soreness, and a dry, harsh cough. Two months ago had a second and more severe attack of these symptoms, accompanied by fever and dyspnœa. The dyspnœa has become more annoying during the past month. Pain in sternal region still continues, and lately he has been complaining of deep pain in the left infra-axillary region. His face is rather pale; skin moist; pulse, 112 and feeble; temperature, 101°; respiration, 30; is most comfortable when lying on back and left side. Left side of chest more prominent than right; motion restricted on left and exaggerated on right side. When the ear is placed near his mouth while he makes a slow expiration, a distinct puff is heard with each systole. Vocal fremitus on right side normal; on left, absent; percussion over upper half of left side tympanitic. Area of præcordial dulness absent. Heart-sounds normal, but feeble. No bruit audible. Complains of flatulence, and at times vomiting.

During the month and a half following admission but little change was noticeable, except that the lower third of the left side of thorax became flat on percussion.

April 23, 1880, while in the sitting posture, hæmoptysis to the extent of six ounces of blood occurred and he died immediately.

Post-mortem, twenty-four hours after death. The flame of a lighted taper held at a point of left side of the thorax at which an incision was made, was blown away from the body, showing that air or gas was present in the chest. The chest-cavity contained about one pint of brownish fluid. No evidences of pleuritis; left lung from base to apex very hard, and dark red, almost black, not containing a bubble of air, and resembling the tissue of the spleen. Microscopic examination showed that the air-cells were completely filled with blood; no signs of pneumonia; no blood in interlobular tissue. In the anterior surface of left main bronchus, about one and one-half inch from bifurcation of the trachea, could be seen an opening about one-quarter inch in diameter, leading into a sacculated aneurism of the inferior surface of the transverse portion of the aorta. The outside diameters of the aneurismal tumor were antero-posteriorly one and one-half inch; laterally, two inches. The tumor contained about three drachms of blood and numerous lamiæ of fibrinous material. Heart structure normal. The case is interesting not only for the curious situation of the aneurism, but also for the pneumothorax occurring without a rupture of the lung.

During my service in the hospital I was fortunate enough to observe six cases of thoracic aneurism, in all of which there could be heard a distinct *puff* whenever the patient made a prolonged expiration, and the ear of the listener was placed in close proximity to patient's mouth.

BELLEVUE HOSPITAL, N. Y.

THE SALICYLIC TREATMENT AND HEART AFFECTIONS.

At a recent clinic at Bellevue Hospital, Professor Flint, Sr., presented a young man who was suffering from rheumatic pericarditis. He was admitted to the hospital because of an attack of rheumatism, which came on three days previously, and was limited to the ankle and knee-joints. It was his first attack; there was no evidence of disease of the heart. The treatment consisted in the administration of the salicylic mixture, each dose of which contained twenty-two and one-half grains of salicylic acid, every three hours; one-half drachm of bicarbonate of soda every three hours, and lead and opium wash applied to the knee. Two days after the patient's admission the swelling and pain in the joints were much diminished, and on the third day had almost entirely disappeared. Professor Flint thought it was fair to conclude that the treatment had prevented the further progress of the rheumatic affection of the joints. The day following his admission a double pericardial friction murmur was heard, which was followed by an effusion into the pericardial sac, and five days later, the double murmur having disappeared, a systolic endocardial murmur was heard over the apex. Professor Flint took occasion to remark in this connection the importance of giving a sufficient amount of the alkalies to render and keep the urine alkaline, and thus diminish the liability to the heart complication. The salicylic acid or the salicylate of soda treatment of the joint was proper, but it did not prevent the heart from becoming affected. He had observed that rheumatic pericarditis and endocarditis were more common since the introduction of the salicylic acid method of treating rheumatism than before, when the alkaline method was relied upon almost entirely, and it was due to the fact that the physician neglected to render the urine alkaline by giving alkalies.

QUEBRACHO IN ASTHMA.

Professor Flint also presented a lad, thirteen years of age, who was suffering from asthma, emphysema, and bronchitis. His father had had asthma. The patient began to suffer from attacks of dyspnœa when six years of age, and, although asthmatic attacks often began early in life, they seldom began so early as the sixth year. None of a number of brothers and sisters had the disease. The attacks came on once a month, sometimes not oftener than once in three months, and during his residence in Kansas, where he went from New York City to spend two years, he was free from his trouble a number of months; but after his return to New York City he had an attack nearly every week. Professor Flint remarked in this connection that the climate of Kansas, and more particularly that of Colorado, had been spoken of very highly by some as being favorable to the affections from which the patient was suffering.

The treatment, during the attacks of dyspnœa, consisted in the administration of the fluid extract of quebracho, fifteen minims every hour.

THE TREATMENT OF HYDROCELE.

On December 15, 1881, at the same hospital, Dr. Weir presented four cases of hydrocele, performing four different operations for their radical cure, viz., in the first case injecting the tincture of iodine into the sac containing the fluid, in the second injecting pure carbolic acid, in the third injecting a ten per cent. solution of carbolic acid, and in the fourth case performing Volkmann's operation. In the latter case there was found to be considerable inflammation and thickening in the sac, and it was not expected that the patient would recover so soon as if it were a simple case. One week later the patient on whom the pure carbolic acid injection was made was again presented at the clinic, and the inflammation and enlargement had almost entirely subsided. The advantage of this method over that by the injection of the tincture of iodine was that there resulted less serous exudation prior to adhesion of the two opposing surfaces of the tunica vaginalis.

IODIDE OF POTASSIUM IN SMALL DOSES.

Although it is the fashion at present to prescribe large doses of iodide of potassium in syphilis, with the view of obtaining rapid and permanent results, there are a number of hospital physicians and surgeons who still believe in the efficacy of small doses of this drug in that and other diseases in which it is employed. Professor A. Clark, for instance, rarely, if ever, administers the salt in doses exceeding ten grains three times daily, while other physicians are content with half that amount.

A fact worthy of consideration in this connection is that the smaller doses have a marked effect upon those patients who, by the previous use of tonics, are in a good receptive condition for any of the powerful eliminatives. More, in fact, appears to be due to the good condition of the patient at the time than the size of the dose administered. If there is a good, solid constitutional foundation to work upon, the utmost reliance can be placed upon small doses of any medicine. This seems to be pre-eminently the case with iodide of potassium.

THE NEW SAINT.—In honor of Saint Joseph Labre, the pilgrim of Boulogne-sur-Mer, who was recently canonized at Rome, the Catholic University of Lille has founded a chair in the Faculty of Medicine, and endowed it with 100,000 francs.

Progress of Medical Science.

ACETONURIA IN FEBRILE DISEASES.—A preliminary communication by Dr. Rudolf von Jaksch (*Prager medicinische Wochenschrift*, October 5, 1881) embodies the following conclusions regarding acetonuria in fevers: 1st. A red color is produced in the urine by the addition of chloride of iron, not only in diabetic coma, but during the course of diabetes without coma, and with great regularity in the eruptive stage of some acute exanthemata. The substance to which the red coloration is due may always be extracted from the urine by means of ether. 2d. The occurrence of Lieben's iodoform reaction in urine is not directly dependent upon the presence of the substance producing the chloride of iron reaction, but is observed in all diabetic urine. 3d. An equally intense iodoform reaction regularly occurs in the distillates of febrile urine. Its intensity plainly depends on the height of the fever. 4th. The iodoform reaction is due to the fever alone, and is entirely independent of the nature of the disease.

NOTES ON CARBOLIC ACID POISONING OCCURRING DURING THE EMPLOYMENT OF LISTERIAN DRESSINGS.—In cases treated by Lister's method, Falkson was always able to demonstrate the presence of a large amount of carbolic acid in the urine, as much as one-third to one-half per cent.; these figures including not only the amount of carbolic acid found as such, but also its derivatives, hydrochinon, brenzcatechin, etc. The greatest absorption occurs under the use of irrigations, the least from dressings of carbolized gauze, while compresses simply moistened with carbolic acid introduce considerable amounts of the latter into the system. Absorption takes place with great rapidity from the peritoneum; less rapidly from the following parts, in the order named: pleura, synovial membrane, and bones.

Sonnenburg's test for the presence of an abnormal amount of carbolic acid in the urine is unreliable (this test consists in the demonstration of the absence of free sulphuric acid, as shown by adding a solution of chloride of barium to urine previously acidulated with acetic acid; in the healthy urine this gives a precipitate of sulphate of barium, the precipitate not occurring, however, when the urine contains carbolic acid, which combines with the sulphuric acid to form sulpho-carbolic acid) because normal urine sometimes contains sufficient phenol to mask the reaction. It is preferable to ascertain separately the amounts of contained sulphuric and carbolic acids by the respective methods of Baumann and Brieger. Falkson carried out this plan in twenty-six patients treated by Lister's method, and found that the percentage of carbolic acid in the urine stood in direct ratio with the intensity of coloration and increased specific gravity of the latter, and in inverse ratio to the quantity of urine passed. The latter is usually diminished. Falkson recommends, therefore, a liberal administration of water, both as antidote and prophylactic against carbolic acid poisoning. Hildebrandt relates a case of poisoning with this drug, where recovery was procured by emptying the stomach of the patient in a novel manner. A ten-year old boy swallowed by mistake a considerable quantity of a ten per cent. solution of carbolic acid, and, after a few moments, sank to the floor unconscious. When

the patient was seen, ten minutes later, he was comatose, the cornea being wholly insensitive. An œsophageal tube was quickly obtained and introduced as far as the stomach, but the funnel could not be attached by reason of the elastic tubing being missing. Falkson then filled his mouth with water and propelled this into the patient's stomach through the tube, repeating this procedure several times; he then sucked at the tube until fluid rose from the stomach, when the free end of the tube was allowed to hang from the patient's mouth, and the contents of the stomach were evacuated by syphonage. This manœuvre was repeated, until finally the missing tube was obtained and the stomach then thoroughly washed out. Five or six Pravaz' syringefuls of ether were also injected subcutaneously during a period of an hour and a half, after which time the cornea, and a half hour afterward the skin, became sensitive. Recovery was uninterrupted.—*Med. Chirurg. Rundschau*, September, 1881.

Amyloid Degeneration of the Kidney without Albuminuria.—In a communication made to the Medical Society of the Hospitals at Paris, June 10, 1881, M. Straus combats the statement of Bartels, to the effect that amyloid kidney is invariably attended by albuminuria. The opinion of M. Straus is based upon a case of phthisis and tuberculous pleuritis of long duration. Careful urinary analysis, made at every stage of the disease, failed to reveal albuminuria. The autopsy showed extensive amyloid degeneration of the spleen, intestine, and kidneys. The degeneration was confined in the last-mentioned organ to the pyramidal substance, not having involved the Malpighian tufts or the convoluted tubes, to which fact M. Straus refers the absence of albumen in the urine.—*Le Progrès Médical*, June 18, 1881.

Extraordinary Case of General Neuroparalytic Hyperhydrosis.—Dr. Orsi describes the following case: A lady, forty years of age, of nervous temperament, who had always enjoyed good health, was seized with a cough in October, 1877, and suffered from it for four months. When the cough had ceased, a profuse perspiration set in, lasting for three months, that is to say, until the beginning of summer. At this time the perspiratory function again became normal, and the patient having regained her somewhat weakened strength, appeared to have perfectly recovered. But, in November, 1878, the hyperhydrosis again returned, to remain until the middle of May, 1879. It was more profuse than in the first instance, and left the patient in a state of great prostration and profound anæmia, suffering from obstinate anorexia, cephalalgia, confused ideas and turbulent dreams; in fact, it was feared that she might become insane. With the return of cold weather, in November, 1879, the strange phenomenon appeared for the third time, with increased gravity of symptoms. At about 8 P.M. the patient would experience a flush all over the body, but especially in the head. The skin would become reddened and tumefied, and perspiration would ooze out in large drops, and flow in little streams from the person of the patient. The quantity of the cutaneous transpiration was such that a mist would gather around her, and the vapor condense on the walls and ceiling of the room, as in the dampest subterranean vault. The total loss by perspiration was estimated at from two to ten pounds. When the sweating was at its height, the patient was seized with grave dyspnœa, and an almost killing sensation of weight in the pit of the stomach. Sometimes she experienced pain in the knees, or enteralgia, accompanied by the vomiting of an acrid, bitter fluid. Thirst was not to be quenched by any liquid. The eyes were brilliant; the pupils were equally diminished, not dilating at the end of the seizure; temperature, 37.8° to 37.9° C.; urine scanty, and without albumen or sugar. At 3 A.M. the hyperhydrosis would diminish, to cease altogether at 6 A.M. The patient would then fall into a deep sleep, at times interrupted by attacks of convulsive cough, or of orthopnœa of short duration.

Another fact worthy of mention is that, when the copious sweating ceased, a diffuse eruption appeared, sometimes upon the trunk, sometimes upon the extremities, very much resembling that of scarlatina. It lasted from twenty-four to forty-eight hours, disappearing with the usual phenomena of desquamation. If the attack had been of long duration and the loss considerable, the patient was prostrated; if of short duration, with a slight loss, she would suffer from cephalalgia, confusion of ideas, and melancholy. She lost flesh gradually, but progressively, due to want of appetite and dyspepsia. The menstrual flow, and every excitement of the passions exercised a baneful influence over her trouble. Nothing abnormal was discovered in the viscera. An anæmic bruit was heard. The most varied treatment proved unavailing.

The author denies the existence of chronic miliary fever, because there was no fever of irregular type; no acrid perspiration; characteristic urine; rapid change from pallor to cutaneous redness; delirium or hemorrhage. The almost constant abdominal symptoms were also wanting. He also rejects masked malaria, because of the absence of enlarged spleen, etc., and formulates a diagnosis of a paralytic neurosis of the vaso-motor centres.—*Gaz. Med. di Roma.*

Electric Illumination Applied to Physiological Demonstrations.—Dr. Laborde, editor-in-chief of *La Tribune Médicale*, explains in the number of that journal published on October 2, 1881, his instruments of projection, by means of which he is able, with electric illumination, to demonstrate, for classes of students, not only the graphic traces made by organs, but the organs themselves during their functional activity. The latter result is obtained by the adaptation of the solar microscope to the projection apparatus. M. Laborde has succeeded by this combination in demonstrating the turtle's and embryonic chick's heart in the active performance of their functions, as well as the capillary circulation in the web of a frog's foot and in its mesentery.

Inoculation in Cases of Contagious Peripneumonitis.—In a paper read before the Paris Academy of Medicine (*Le Courrier Médical*, October 1, 1881), M. Leblanc combats the theory advanced by M. Bouley relative to the efficacy of preventive inoculations in cases of contagious peripneumonitis (epizoötic). His conclusions are as follows: 1st. Contagious peripneumonitis of cattle may be developed spontaneously under the influence of causes which have been recognized since the last century. 2d. Inoculation with serum from the lungs of an animal suffering from the disease does not provoke an analogous malady in healthy cattle, nor does it produce the pathological appearances due to contagious peripneumonitis. 3d. The results of inoculation are so varied, both as to symptoms and to their sequelæ, that they cannot be regarded as

analagous to the effects obtained by inoculation with the virus of other contagious diseases. 4th. Inoculation does not, in many cases, confer immunity. 5th. The protection which is afforded in some cases by inoculation is only of six months' duration, as reinoculation demonstrates. 6th. Sanitary and hygienic measures furnish equally satisfactory results, and are less expensive.

Conditions Necessary to the Efficacy of Animal Vaccine Virus.—M. Burg states in a note read before the Paris Academy of Medicine (*Le Courrier Médical*, October 1, 1881), that animal vaccine virus, in order to produce results equally satisfactory as those obtained by arm-to-arm vaccination, must be taken from the animal on the sixth day. Moreover, the animal must have a limited number of vesicles; otherwise the virus loses some of its efficacy by attenuation. M. Burg advocates vaccination with humanized virus, as being cheaper, more easily accomplished, and more satisfactory than inoculation with animal virus.

Effusions of Blood at the Fold of the Elbow.—An account of this condition is not found in the current text-books. Dr. Charvot (*Revue de Chirurgie*, September, 1881) relates six cases of this kind, and observes that this disease may give rise to errors of diagnosis. He concludes his account of the cases with the following statements:

1. Injuries which affect the elbow directly, such as contusion, dislocation; or indirectly, such as a sprain or diastasis, frequently give rise to considerable effusion of blood throughout the whole of the upper limb, and especially at the fold of the elbow. 2. These extravasations of blood appear to arise from rupture of the vessels around the joint. 3. The effusion of blood is not always completely absorbed, and is transformed into fibrinous clots, occupying the antero-internal aspect of the fold of the elbow in front of the articulation, and in the substance of the brachialis anticus. 4. The resulting tumor is as large as an egg, unequal, of cartilaginous or even osseous hardness. At first it is independent of the bone, but subsequently it may become attached to the humerus. 5. Thus, the effusions of blood which partly fill up the coronoid cavity may interfere with the movements of the articulation, and considerably limit flexion. 6. They generally remain stationary for a long time, and are but little influenced by ordinary treatment. 7. Finally, they may give rise to errors of diagnosis, and may be mistaken for exostoses of the humerus, or tearing away of the coronoid apophysis, etc.

Uselessness of Antiseptics in Ocular Surgery.—In a report of his seventh hundred case of cataract extractions, Dr. H. Knapp (*Archives of Ophthalmology*, September, 1881) makes the following remarks:

"The dressings consisted of the ordinary charpie-flannel bandage. The flannel, in summer, was replaced by gauze, and when the wound was firmly united, left off altogether. The eye was covered with a small pad of absorbent cotton kept in position by a strip or two of court-plaster.

"I will not omit to mention that neither spray nor antiseptic dressings, nor disinfection of the instruments and the eye and its surroundings, have been resorted to. All that was done preparatory to the operation was careful washing of the instruments, the hands of the operator, and the eyes of the patients, with ordinary water. I freely confess that the advocates of antisepsis in eye-surgery have thus far failed to convince me of the utility of their varied procedures, and I do not think it incumbent upon me to waste time by what I consider to be superfluous complications of treatment. For two years and a half have I had no case of suppuration after any operation on the eyeball, but three occurred lately. I think the statistics of those who use antiseptic means are no better."

The Primary Union of Wounds.—Professor Verneuil publishes in the October number of the *Revue de Chirurgie* his views on the conditions which should indicate or contraindicate our attempts to obtain healing by first intention. The following conclusions embrace his views on this subject:

1. The attempt to obtain primary union is sometimes essential and imperative, at others only supplementary to the main object of the operation, and again it may be entirely optional. 2. While the chances and risks of failure remain the same under these varying conditions, the possible advantages to be obtained vary greatly. 3. These risks must be incurred, although we should do all in our power to lessen their power in cases where speedy union is the main object in view, as in all plastic operations. 4. But before aiming at primary union in cases where it is only optional, the surgeon should be satisfied that the patient is not the subject of some constitutional ailment, which would contraindicate an immediate performance of the operation. 5. The existing taint should be treated by appropriate measures; but if delay be inadmissible, or if the constitutional malady is not amenable to treatment, then the surgeon should not incur the risk of an attempt to obtain primary union, but should employ some other method of wound-treatment which, while offering the prospect of a less rapid cure, secures a greater safety to the patient.

Congenital Exostoses.—Dr. Schor, of Odessa, publishes (*St. Petersburger medicinische Wochenschrift*, October 1, 1881) a detailed history of three cases of congenital exostoses in the same family. The large number of the tumors, the continued health of the individuals in whose bones they developed, the symmetrical arrangement, and the apparent hereditary character of the exostoses, inclined Dr. Schor to the belief that they owed their origin to rachitis.

Gangrenous Inflammation of the Side of the Neck Due to Exposure to a Draught of Cold Air.—Dr. Moraleda y Esteban sends an account of an interesting case in a letter from Nambroca (Toledo). The patient was a woman forty years of age, and of lymphatic temperament, who had been subjected to various depressing influences. As a result undoubtedly of exposure to a cold current of air, a violent inflammation was set up on the right side of the neck. The inflammatory process was of such a nature as to cause fears of asphyxia, but this danger was averted by antiphlogistic measures. The next day the attendant physician was surprised to find that all the superficial tissues had been converted into a gangrenous eschar, a complication which was serious on account of the invasive character it presented. The mortified tissues were removed from the wound, and the latter was treated with nitrate of silver to favor the elimination of the necrosed parts, and stimulate the tissues to repair. Regeneration soon took place, and the extensive solution of continuity, occupying the whole right lateral aspect of the neck, became cicatrized.—*Rev. de Med. y Cir. Pract.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, January 21, 1882.

RECENT RESOLUTION BY THE ROYAL COLLEGE OF PHYSICIANS.

THE Royal College of Physicians of England has recently adopted the following resolution:

"While the college has no desire to fetter the opinion of its members in reference to any theories they may see fit to adopt in connection with the practice of medicine, it nevertheless considers it desirable to express its opinion that the assumption or acceptance, by members of the profession, of designations implying the adoption of special modes of treatment, is opposed to those principles of the freedom and dignity of the profession which should govern the relations of its members to each other and to the public. The college therefore expects that all its fellows, members, and licentiates will uphold these principles by discountenancing those who trade upon such designations."

If this resolution means anything, it means that a man may believe in homœopathy and practise it to his heart's content, but he may not call himself a homœopath; he may believe that there is nothing like cold water, and he may dose his patients with it internally, externally, and eternally, but he must not call himself a hydropath; he may believe electricity to be the most potent healing agent in existence, and may confine his practice to its administration, but he must not call himself an electropath; he may believe that all diseases are more quickly cured by venesection, but he must not call himself a phlebotomist. In other words, a man may think as he pleases, practise as he pleases, but he must not assume a party designation.

What could have induced the Royal College to adopt a resolution so contrary to all its precedents for the last thirty years, it is not easy to say. Is this concession to liberty of opinion and practice due to the influence of Ringer, whose writings contain not a little clandestine homœopathy? Is it due to the influence of Phillips, who for fifteen or twenty years was a professed homœopath, and whose writings clearly indicate his special training in homœopathic therapeutics? These questions we cannot answer. At a distance of three thousand miles it would be difficult—in fact, impossible—to accurately judge of the influences and motives that induced the Royal College to unanimously adopt the foregoing resolution, which, on debate, was supported by Dr. Priestley, Dr. Wilks, Dr. Beale, Dr. Wilson Fox, Sir W. Gull, Sir W. Jenner, and other noted medical men of the British metropolis. Verily "*tempora mutantur*," etc.

This resolution, guaranteeing liberty of opinion and practice, may be taken as a direct invitation to homœopaths and other dissenters and sectarians to abandon their special designations, and to place themselves in relationship with the college. It remains to be seen whether these gentlemen will accept this invitation—whether they will dare to accept it; whether they will dare to appear before the public simply as physicians relying for success on their individual merit and practical application of what they claim to be superior methods of treatment. The Royal College of Physicians of England has offered the invitation and the challenge; it is yet to be seen whether the sectarians of Great Britain will accept them.

DEATH IN THE DENTIST'S CHAIR.

IN Chicago a death is reported from chloroform in the dentist's chair. The deceased was forty-five years of age, and was in an apparently healthy condition. The anæsthetic was administered by a so-called "expert." Breathing ceased suddenly and death was almost immediate. The cause of death was evidently chloroform. The verdict of the jury was "bad enough—don't do so again." No blame seems to be attached to any one, and every ordinary means seems to have been taken to prevent accident, with the single exception that chloroform was administered instead of nitrous oxide gas or sulphuric ether. Obviously it is rather late to talk of possible idiosyncrasies after the patient is dead, but we constantly hear of them in such cases, and stupid and defiant men still continue to take the risk of administering chloroform for dental operations, despite the verdict of the profession to the contrary.

THE NECESSITIES OF REVACCINATION.

IN view of the spread of small-pox in different parts of the country, the necessity for extensive and wholesale vaccination need hardly be enforced. The profession understand their duty in the matter, and are prepared to perform it. From different centres we hear that extraordinary efforts are being made to protect communities from the ravages of the disease. Despite the efforts of the anti-vaccination-

ists, the doctrines of Jenner have the widest possible following, and there is every reason to believe that in every section the people are in hearty accord with the efforts of the health authorities. The medical men throughout the country can do much to aid the adoption of the necessary protective measure. It would appear to be a duty on the part of every practitioner to advise the families under his charge to revaccinate and thus run no risk. With the use of bovine virus, now almost universal, much of the prejudice against vaccination is overcome in the minds of the people, and the physician has little, if any necessity for argument or persuasion. Although it is impossible to say when the protective power of the virus ceases, it is generally the rule to revaccinate after puberty, and at intervals of from seven to ten years thereafter. Especially would this seem to be necessary in cases of epidemics, or when the occupation of the individual should predispose him to contagion. In all cases of doubt the benefit of such a donbt should be given in favor of revaccination. When the physician is not thoroughly satisfied that his patient is protected, he should revaccinate him without delay, and repeat the operation if he is not assured by trials on others that the virus is trustworthy.

The manner of introducing the virus is so simple as hardly to need reference. Indeed, we would not allude to it here, except in a general way to answer many questions from different correspondents. The rule in this, as in other cities, is merely to abrade the surface with a lancet by cross-scoring, and gently and thoroughly rub in the virus from the squared end of an armed quill. The dried virus on the latter is dissolved by contact with the exudation from the abrasion, and is thus brought in the purest possible form in direct contact with the absorbents. When the vaccinated part is thoroughly dry it is allowed to take care of itself without any protective application being made to it. The point of the lancet is cleaned by dipping it in alcohol and setting fire to the latter. The quills can be preserved in a dry and cool place for a fortnight at a time, or even longer. To this end they are either kept in a small pasteboard box, enveloped in rubber-paper, or in bottles the corks of which are similarly protected.

MEDICINE AT FOOCHOW.

In the tenth annual report of the Foochow Medical Missionary Hospital, Dr. Henry T. Whitney, the superintendent, gives some interesting facts regarding the diseases most frequently met with by him among the Chinese.

The hospital in question has grown very rapidly since its establishment by the late Dr. Osgood, in 1872. At that time a total of 6,606 cases were treated during the year, all but about 90 of these being out-patients. Nine years later, in 1880, the number was 8,651, of which 737 were hospital in-patients.

The disease most frequently met with is rheumatism. This is of the muscular form, the joints being rarely found affected. Syphilis comes next in frequency, yet it is not so common as among Christians. Dr. Whitney also states that it commonly develops in a benign, or rather, non-malignant form.

Leprosy of course is met with quite often. It is a disease which cannot be stamped out until the Government takes most vigorous action in the matter. The common people are full of the grossest superstitions regarding it. When a man is known to have the disease, he is put through a series of ceremonial performances, including the eating of an entire chicken. He can then, it is thought, go anywhere without communicating the disease. When a leper dies, the villagers omit fires for three days, lest the parasite come down in the flames and cause the disease to develop; for the Chinaman believes in the parasitic origin of leprosy, and in this respect is quite abreast with the most advanced pathology.

Vaccination, we are told, is being practised quite extensively, and is gradually superseding inoculation.

Nervous diseases are not uncommon. Epilepsy is readily controlled by the bromides. The insane are numerous, but are rarely seen, being kept in private dwellings, never in public institutions. Dementia is the form most frequently met with by Dr. Whitney.

Probably the best place in the world to study skin-diseases is in China. Every known form is found, except a very few peculiar to India. Eczema, scabies, and the various forms of tinea are most frequent.

The Chinese are very subject to digestive diseases, and nine-tenths of the people have "pi-tung," or dyspepsia, some time during their lives. Bolting the food and improper and insufficient diet are the causes. Lumbricoid worms abound in the Chinese digestive tract, and santonin is a remedy very frequently required.

Bronchitis, asthma and phthisis are common. There is a curious form of hæmoptysis, which has before been alluded to briefly in the RECORD. It often occurs periodically, either every six, twelve, or eighteen months. It rarely endangers life or signifies any phthisical condition. The patient coughs up from several to many ounces of bright red blood. The system suffers for several days, but soon recovers itself. Dr. Whitney inclines to adopt the explanation of Dr. P. Manson, of Amoy, that the trouble is due to the presence of flukes.

Eye diseases are extremely common, owing to exposure to a powerful sunlight, of a shaved, uncovered head, and living in foul and smoky air.

In the opium asylum connected with the hospital, 284 patients were treated in 1880. The plan found to work best is to take away all the opium at once. From one to five days is the longest period

of suffering. In a week or two the habit is broken, and the patients become anxious to leave. Dr. Whitney thinks that from three-fifths to four-fifths are cured by this two weeks' treatment. Restoratives, nerve-tonics, and nerve-sedatives, are, of course, given. A number of statistics regarding the habit have been compiled. From three-tenths to eight-tenths of the male population are given over to it. In 125 cases reported, 70 began the habit for pleasure, 45 on account of disease, and 10 yielded to the pressure of temptation.

THE AMERICAN AMBULANCE SYSTEM ABROAD.

It is with feelings of no little satisfaction that we learn of the prospective adoption of the American ambulance system in London and Paris. Dr. Benjamin Howard, formerly of this city, has succeeded in impressing the London Hospital Committee of the great benefits derivable therefrom, and the time appears to be near at hand when a scheme of hospital and accident service for the larger hospitals of the former city will be an accomplished fact. Dr. Howard has caused to be built under his personal supervision a vehicle for the purpose named, which answers to the most thorough tests to which it has been subjected by the committee, and the proper steps have been taken to inaugurate an ambulance system similar to that which exists here. The carriage, according to accounts in the English papers, is quite unlike and "apparently superior to any in use in America." When the system is duly adopted it is fair to presume that our English cousins will wonder how they could ever have done without it. In this respect it will be repeating the experience in this city.

A similar movement has been inaugurated in Paris by Dr. Henri Nachtel, who will be remembered as the projector of the night medical service in this city. Dr. Nachtel has, as the result of a study of the American system, presented its advantages to the municipal authorities there, and has succeeded in interesting them in a plan which ere long promises to be practically tested in connection with the accident service of the Parisian hospitals. Let us hope that other gentlemen of equal energy and influence in other large cities will imitate their laudable examples, and that their labors in their respective fields will be attended with correspondingly good results.

ANOTHER MEDICAL INSTITUTION OF LEARNING.

The capacity of certain organisms to adapt themselves to their environment furnishes a subject full of suggestiveness to the philosophic mind. The American potato, burrowing in all the soils of Europe; the polar bear sitting in unruffled peace under a Croton-water douche at the Park menagerie; the Englishman ruling India with only one lobe remaining to his liver, all exemplify this frequent and interesting characteristic of living beings.

But while this fact has been long recognized as true of bodies organic, we venture to assert, as something new, that it is equally so of bodies corporate.

That there is a capacity in certain kinds of corporations to respond to almost any surroundings, may be learned from a study of the growth of American medical colleges.

The fact that certain kinds of corporations can respond to any surroundings would perhaps occur to every one who has watched the growth of the American medical colleges. Their history is, of itself, a lesson in political science, social economy, and human nature.

The American medical college is an institution which has now, in its geographical progress, touched nearly every point on our coast-line, including the great lakes. It ornaments the banks of our larger rivers, perfumes the air of the prairies, gladdens the anti-phthisical climate of the Rocky Mountains, and has now at last begun to invigorate the gynecological politics of Utah.

The developmental powers of the American medical college are alike surprising and unrestrainable. It springs up in response to the minutest want. We have colleges solely for the benefit of the professors; colleges (presumably) for the benefit of the students; colleges which just hit the needs of the general practitioner, which teach the local peculiarities of disease, and the personal peculiarities of the locality. There are institutions which inculcate Christian principles along with medical practice; institutions which teach allopathy, homœopathy, co-education, eclecticism, iatrophysics, and all the new Californian specifics. In fine, short of every doctor having his own college, the condition of medical education in this, our beloved and incomparable land, could hardly be improved.

The last "real want" was supplied a few months ago by the organization of a medical college at Weber Station, U. P. R.R., Utah Territory. "The absolute necessity of such an institution in Utah has long been felt," and Professor X. has at last had the self-sacrifice to supply it. He has sent us his prospectus, with the request that we give the new school a "good send-off." We are pleased to be able to do so.

The school is conveniently situated—for those travelling that way. The locality is not too healthy. Board is cheap: by hunting the bison Sundays, a sufficient supply of meat for the working days can be obtained. The clinical advantages are exceptional. Gunshot- and scalp-wounds abound. The gynecological professor has, in one family, the care of one hundred wives, and thus controls his own clinic. The requirements of graduation are three years of medical study, "including two full courses of lectures and twenty-one years of age." This is, perhaps, the only college in America where the moral character is not mentioned or inquired into. One professor

does all the teaching, which obviates faculty quarrels, and promotes simplicity and harmony in modes of instruction. Co-education of the sexes prevails, and might indeed be said to be in the majority, since in the class of 1880 there are three ladies and two gentlemen. We are unable to say whether these latter are red men or only Mormons, or neither. In fact, there seems to be everything in this new institution to make the bosom of the native Utahite swell with emotion. We pronounce, as requested, its benedictive "send off." It is demonstrated now that anybody can start an American medical college anywhere.

THE CONTROVERSY CONCERNING HYPNOTISM.

We publish to-day a letter from Dr. Beard, which will close, we trust, a controversy already much too prolonged.

On the testimony of Dr. Hammond, Dr. Beard, and others acquainted with the matter, as well as from other sources, we have very convincing proof that the "trained subject" exhibited in England is not a fraud, so far as hypnotic phenomena are concerned. This, if true, turns the case rather against Dr. Brown, and largely diminishes the pertinence of his not too concise communications to THE RECORD and the *British Medical Journal*. It seems, indeed, quite improbable, on the face of it, that the "subject" in question would or could have deceived so many persons in this city last winter, where his performances were closely studied. Nor will Dr. Brown convince the unprejudiced that he had the astuteness to discover in half an hour deceptions which were not detected by others more expert in several months. The facts seem to be that the "subject," frightened or angry at the somewhat aggressive methods of his investigators, failed to go into the hypnotic condition perfectly. In consequence, it is not, perhaps, surprising that Dr. Brown received a vote of thanks for having "brilliantly demonstrated a trickery." But, in the light of what appear to be the actual facts, he carried away hollow honors, having failed alike to discover the truth and to treat a foreign guest with justice and courtesy.

"CORKED" ETHER CANS.—Dr. William P. Mason, of the Troy Rensselaer Polytechnic Institute, writes: "The following experiment may not be without interest in view of the considerable prejudice existing ing against 'corked' ether cans. Fresh cans of 'Squibb's' ether (half- and quarter-pound) were opened and the amount of absolute ether immediately determined. They were then carefully corked with soft corks and set aside. The ether was redetermined at the end of three, and again at the end of seven weeks, with results identical with those of the first determination. Cans where the corks had been merely *dropped* in place, showed marked deterioration in quality of contents at the end of the first week. It thus appears that where proper care is taken in corking, the strength of the ether may be relied upon."

Reviews and Notices of Books.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY: A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with chromo-lithographs and woodcuts. In six volumes. Vol. I. Royal 8vo, pp. 702. New York: Wm. Wood & Co.

THE first volume of this important work appears at a time when the opportunity is offered for filling an acknowledged gap in the literature of surgery. Its design, although not entirely original, aims to be more comprehensive in its scope, more thorough in its detail, and more truly representative in its range, than anything of the kind heretofore attempted.

The object of the work is tersely stated in the preface: to furnish "in a comprehensive and yet not unduly extended form a systematic and practical treatise upon all those subjects which are properly considered to pertain to the science and art of surgery, the various topics discussed in the several volumes having been entrusted to distinguished writers of various countries, who are believed to be specially qualified to give authoritative instruction, each upon the particular subject which he has undertaken." The full realization of such a project, except as foreshadowed in the present volume, is, for the present at least, in prospective. But the assurances of unqualified fulfilment of the promises of the editor and publishers, given in the work before us, are of the most pronounced and definite character.

The general plan has been devised and matured by a most thorough and accomplished surgical scholar, and his selection of authors and adaptation of subjects have been with the sole view to the fitness of men and things.

As a natural introduction to what is to follow, the first volume lays the general foundation for the study of special subjects in surgery. Hence, such topics as are looked upon as belonging to the department of general surgery, including inflammation, erysipelas and pyæmia, hydrophobia and glanders, scrofula and tubercle, rachitis and scurvy, are discussed in full detail. In this volume are also contained articles on the reciprocal effects of constitutional conditions and injuries, upon the general principles of surgical diagnosis, upon operative surgery in general, upon plastic and minor surgery, upon the use of anæsthetics, upon shock, traumatic delirium and delirium tremens, and, lastly, upon amputations.

It is not difficult to appreciate, in view of the number and variety of the subjects discussed, that the field occupied is a large and important one, and, when properly worked, lays the broadest possible foundation for the consideration of all the special departments of study in the science and art of surgery.

The manner in which this necessary groundwork is laid is eminently satisfactory to the student, for this volume is emphatically one which, to be properly appreciated in its scope and utility, must be thoroughly and patiently studied. Each chapter is the thoughtful work of a master, and must, in turn, command the careful attention of the student.

Although some of the details may appear uninter-

esting to the superficial reader, they cannot be ignored by any one who determinedly and conscientiously reads the work. The elaboration of the articles is a necessity which must be admitted in view of the general character of the work, and saves numerous and useless repetitions, which would otherwise have to be made in applying general principles to special practices. The first volume, then, is one treating on general principles, which the reader will be ready to adapt for himself as he studies the other volumes. Indeed, to the advanced student and practical surgeon, the application of these principles becomes quite natural and easy, while it lifts him, as it were, on the higher planes of thought and enlarges his field of vision accordingly. This is, perhaps, saying a great deal for the character of a volume which, from the necessities of the plan, must be considered the least inviting, at least for the casual reader, of the whole series. The volume may be considered as standing alone as regards the masterly and comprehensive manner in which the different subjects are treated, and so far as it goes, is complete in itself.

The arrangement of subjects is at once natural and systematic. As may be anticipated, the first article is on the pathology of inflammation. Starting from the health line, the distinguished author and renowned pathologist, Professor Stricker, of Vienna, carries his reader through all the local and general disturbances of nutrition which finally eventuate in a well-developed and classic phlegmon. The tissue-changes are described with characteristic clearness and minuteness, and all the dependent circumstances and conditions are fully and comprehensively presented. The whole subject is gone over in a manner that leaves nothing to be desired.

Following the discussion of the strict pathology of inflammation, as interpreted by the methods of the histologist, is the consideration of inflammation from the clinical standpoint of observation of the practical surgeon. This article is by our distinguished townsman, Prof. Wm. H. Van Buren, M.D., LL.D. The whole subject is most thoroughly treated by this author: every possible question is answered concerning the phenomena, causes, progress, lesions, diagnosis, and treatment of inflammation, and the reader is left to wonder how so much can be said on such an apparently dry subject in such a charmingly inviting manner.

The article on erysipelas, which is the third in order, is written by Prof. Stillé, of Philadelphia, than whom, for the work, no one with better qualifications could have been selected. The causes, symptoms, diagnosis, and treatment of this affection are duly considered, the author looking upon it mainly as the development of a cachectic condition and requiring tonic treatment.

Pyæmia and allied conditions is treated of in a terse and straightforward manner by Prof. Delafield, of this city. The theory of pus-absorption is discussed, also the chemical and germ theory, and the relation of mechanical and infectious emboli to the lesions of the affection. The author believes in the preventive treatment as a prime necessity, and has little, if any, confidence in absolutely curative measures. This, it strikes us, is an extreme view, hardly warrantable in many cases of blood poisoning as they occur in surgical practice.

Hydrophobia, glanders, and malignant pustule are topics which are presented by William S. Forbes, M.D., Senior Surgeon to the Episcopal Hospital, Philadelphia. This author has very systematically grouped the facts bearing on these diseases, analyzed their significance, and arrived at the usual conclusion as to their incurability. The article is well written, and gives accurate pictures of the diseases named.

Scrofula and tubercle, by Henry Trentham Butlin, of St. Bartholomew's Hospital, is, in its treatment, at once clinical and pathological, and gives the reader a most satisfactory and comprehensive view of the present state of our knowledge on these subjects.

Rachitis, by Prof. J. Lewis Smith, of this city, is treated in much the same manner, and embodies the results of his large experience in the study and treatment of children with the disease. His views endorse those of other equally experienced observers in the same field.

Philip S. Wales, Surgeon-General U. S. Navy, contributes the article on scurvy, and gives an interesting and exhaustive account of its history, etiology, morbid anatomy, symptoms, diagnosis, and treatment. Studying it principally from the point of view of the navy surgeon, he lays becoming and particular stress upon the preventive measures to be adopted, and emphasizes the triumphant results of the present well-known methods of treatment.

An exceedingly instructive and interesting article, on the reciprocal effects of constitutional conditions and injuries, is written by Professor Verneuil, of Paris. In this contribution are answered in a straightforward and satisfactory manner many of the questions which perplex the surgeon in deciding to operate in the face of contraindications. The whole subject is grasped with the hand of a master, and leaves nothing to be desired, either in comprehensiveness of scope or thoroughness of detail.

Professor D. Hayes Agnew, M.D., of Philadelphia, in his chapter on the principles of surgical diagnosis, although going over well-trodden ground, infuses an interest in his subject by the numerous and telling applications of these principles to practice. This article is, perhaps, the first one which will arrest the attention of the casual reader in search of practical points, and he will read it, in spite of himself, from beginning to end.

The causes, symptoms, pathology, and treatment of shock is the portion allotted to Dr. C. W. Mansell-Moullin, of London, who presents the subject from theoretical and practical standpoints. His remarks on the pathology of shock are particularly interesting in connection with the experiments of Goltz, Tappeiner, Muller, and Lewisson.

Dr. William Hunt, Surgeon to the Pennsylvania Hospital, Philadelphia, takes up the discussion of the subjects of traumatic delirium and delirium tremens in a manner that assures the reader of his powers of observation, and his abilities for generalization. The causes of traumatic delirium are exhaustively considered, and give particular interest to the study of this ofttimes formidable condition. His remarks on the treatment of this and delirium tremens are practical and pithy.

The chapter on anæsthesia is by Professor Henry M. Lyman, of Chicago. If it has any fault, it is that of detailed exhaustiveness concerning anæsthetic substances seldom, if ever, used; otherwise the general principles and practice of anæsthesia are interestingly and profitably set forth. In fact, it appears more as a treatise in itself than an encyclopædical contribution.

Dr. John H. Brinton, of Philadelphia, in his discussion of the conditions demanding surgical opera-

tions, will secure a wide reading. Not only will this be so on account of the intrinsic interest in the subject, but by the thoroughly appreciative way in which it is treated. It would be well if every surgeon in the land could study the chapter and take its practical lessons to heart.

But the general practitioner will naturally become most interested in the communication on minor surgery, by Dr. Charles T. Hunter. This section is very profusely illustrated with representations of the application of bandages and other apparatus, and the descriptions are admirably clear.

It would seem that the article on plastic surgery, by Professor Christopher Johnston, of Baltimore, was written more for the sake of bringing out well-recognized principles than of applying any such to special cases. So far, it has fulfilled its object admirably, although, in the discussion of the general subject, that of skin-grafting appears to have undue prominence.

The last subject of this volume is that of amputations, exhaustively written up by the editor, Professor John Ashhurst, Jr., of Philadelphia. The history of these operations is given from the earliest periods to the present, and all the special methods now in vogue are carefully described. From every aspect the article is a classical one, and will be appreciated as such by every one who cares to study operative surgery.

In concluding this somewhat lengthy review, we repeat, that if the work as a whole is carried out as it has been commenced, there will be nothing to compare with the "Encyclopedia of Surgery" in any language. The volume is elegantly printed, and contains excellent woodcuts and elegant chromo-lithographs.

Treatment of Hemorrhages Produced by Epithelioma of the Womb.—At a conference held at the Institute of Operative Therapeutics, at the Hospital de la Princesa, according to the *Siglo Medico*, the following remarks were made in regard to the treatment of hemorrhages due to uterine epithelioma:

1. Art can afford great relief to patients suffering from uterine epithelioma, though the disease is incurable. 2. Ergot is of no value in these cases, because the dry and scirrhiform uterus is infiltrated with epithelial cells which cause the atrophy and destruction of the contractile fibro-cellular elements, over which, in the normal state, ergot exercises its action, contracting the vessels and diminishing their calibre. 3. Chlorides of zinc, in the semi-fluid form, not in solution, should be used; plugs of cotton are to be rolled, smeared with the chloride, and applied to the affected surface, taking care to prevent dripping. 4. Hemorrhage is checked in this manner; other procedures are totally or almost useless. 5. Such bleedings may terminate life, if not attended to. 6. Chronic hemorrhages, or those which are repeated at greater or less intervals, establish a certain tolerance of the organism, and if the patient does succumb to them, it is not immediately, though they do not receive treatment. 7. The natural and inexplicable tendency which hemorrhages have of recurring and ceasing spontaneously has endowed many drugs with hæmostatic virtues, although they may be useless if taken by the month, and of but little value topically applied. 8. The more hemorrhages are prevented, the longer will the fatal issue be deferred.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 5, 1882.

Fordyce Barker, M.D., LL.D., President, in the Chair.

Dr. Samuel Sexton read a paper, entitled

THE TREATMENT OF DISEASES OF THE MIDDLE EAR AND CONTIGUOUS PARTS BY MILDER MEASURES THAN THOSE COMMONLY IN VOGUE (see page 57.)

The President invited Dr. C. H. Burnett, of Philadelphia, to open the discussion, who said that he could indorse what had been stated by the author of the paper, so far as his personal experience extended; some points, however, had been alluded to upon which he had not had any experience. He had seen the neuralgic cases referred to as liable to be mistaken for inflammatory ones, and he had also seen artificial aural disease which had been mistaken for the original affection. Such cases were important, because of the damage done by surgical and medical interference. As already stated by the author of the paper, there is a very great variety of mastoid affections, and of some of those cases he had been obliged to study the natural history, and had learned a great deal thereby. A short time after he began to practice, he was asked to see a physician who had middle-ear disease, and, as he (Dr. Burnett) thought, mastoid disease. None of the five gentlemen present at the consultation were willing to operate for the latter. The patient was over fifty years of age, and was recovering from a severe attack of pneumonia. The drum-head was bulging, he complained of deafness in one ear, with some pain, and he (Dr. Burnett) thought it should be incised. A few hours afterward rupture occurred, a large quantity of gelatinous matter escaped, and temporary relief followed; but ultimately more pronounced symptoms developed, and he advised an operation for mastoid disease. Within two weeks the patient passed through all the stages of that disease, but no operation was performed. The membrana tympani was kept open by incisions. So long as that was done every day or two, the pain was relieved, and finally there was a discharge of purulent matter from the cortical portion of the mastoid cells. Perhaps this was a case which should have been operated upon, but recovery took place by natural processes, and the patient had had no subsequent trouble with his ear.

Another case was one which he saw in the Presbyterian Hospital, Philadelphia. The patient, twenty-four years of age, was found insensible, and with a large wound behind and extending across and into the ear. The wound in the mastoid region was very large. The posterior auditory canal was opened, and there was facial paralysis. Unconsciousness continued for two weeks, after which the patient had intense headache upon the opposite side, with enlarged pupil. Finally a mastoid sequestrum was removed, and the wound healed. The membrana tympani was not perforated. Hearing was restored to nearly normal, but the facial paralysis remained unchanged. From a careful examination of the sequestrum, it was believed that a portion of the facial canal was removed.

With reference to the sulphide of calcium, he had used it in one case of furuncle of the ear, occurring in a strong man, thirty years of age. The difficulty rapidly subsided, and the patient recovered without further trouble, which was worthy of notice, in view of the fact that the disease has a well-known tendency to recur. He asked whether the use of the sulphide of calcium should be limited to strong, robust patients, or could it be administered with safety to the cachectic, etc.?

Dr. Roosa said that the essayist had been very frank in the statements made in his paper, and he would, therefore, be equally frank in the few remarks which he wished to make in reply.

With regard to that portion of the paper which treated of the etiology of aural disease, he would have but little to say; for we are tolerably familiar with the accepted etiology, and there would be no differences of opinion with the author of the paper, except, perhaps, that he laid more stress upon what he called reflex nervous influence than most of the writers upon this subject had done. Concerning that portion of the paper in which its author spoke of necrosis, removal of granulations, etc., he had nothing to say, except in way of commendation, which we all would give it as recommending sound surgical practice. But with regard to the use of the sulphide of calcium, pulsatilla, etc., and abstinence from surgical interference, he was so positively at variance with the gentleman, that he was embarrassed in announcing his opinions. "It was an honored gentleman, now present, and formerly President of this Academy, who taught me the surgical principle that free vent should be given to concealed pus, and that the swollen and inflamed muscular or connective tissue, or periosteum beneath which it is, should be incised. I have criticised, as a pupil may, his teachings, but I have found in my own practice, quite different from the experience of the author of the paper, that these principles are correct to this day.

"I cannot verify the experience of Dr. Sexton or Dr. Burnett as to the value of the sulphide of calcium in the treatment of aural disease. I have tried the drug in furunculus and in diffuse inflammation of the external auditory canal, and I have not known it to produce any effect whatever. I have never dared to try it in acute inflammation of the tympanic cavity. This question becomes one so largely of personal experience, that it is difficult to speak intelligently upon it—for one man sees what another fails to see, and one man fails to see what another sees; but I will endeavor to formulate, in a brief way, the principles which I still adhere to, which I have announced in as public a way as it is possible to announce them, and which I do not believe have been, as yet, overthrown.

"Given a red membrana tympani; given, at the same time, serious pain referred to the ear—and by serious, I mean that which will keep the patient from sleeping, cause him to cry out or groan with suffering—given these conditions, and if they be not speedily relieved by the use of the warm douche, I believe, and it accords with my experience, taken with whatever of salt you please, that there is no remedy to be compared in any manner, as to value, with leeches, and I think the notion that the leech-wounds, or the attempts to stop the hemorrhage, causes such serious symptoms, tends to deter us from using them, and will not be verified by most observers.

"I believe, also, that if the drum-head be bulging, and at the same time there be very considerable pain, it is much better, although many people get well without it—many people go to battle and do not get killed—that a man will get sleep quicker and get well sooner if that drum-head is incised with a needle. As regards my notions of mastoid disease, I have clearly formulated them in accessible print. They do not agree with those of the author of the paper, so far as I understand them. I admit that there is a kind of mastoid inflammation which should not be incised. The President of the Academy once quieted my fears about a case of phlegmon of the mastoid process, and by his advice I was induced to wait a little while, and the patient recovered, with evacuation of pus from the auditory canal. That class of cases is easily distinguished from those of peritonitis, external or internal.

"I will not go over the principles to which I still adhere, and which are formulated in what some of you have read upon that subject. I wish also to say that I am very far from believing that every case of aural disease is to be attacked with leeches or the knife; but I simply believe, as I have stated, that there are many cases in which the knife and leeches, as antiphlogistic measures, are absolutely necessary. And I have also heard it stated, on good authority, that cases have passed out of the hands of those who have treated them with the sulphide of calcium, and have come to the knife after all.

"Again, I find a great similarity in the teachings of the Homœopathic Otological Society and what we have heard from the reader of the paper this evening. There is no reflection in that assertion. But these are the principles of homœopathy. They may be correct and we may be wrong. The principles of treatment enunciated by the author of the paper represent the kind adopted by my friends in that society, for I have several personal friends among its members.

"I cannot as yet see that the principles of surgery have been turned upside down, as it would seem to me they had been if we could assert, as the gentleman does, that he now sees no cases of acute aural disease which require leeches or the knife."

Dr. O. D. Pomeroy said that he felt embarrassed in attempting to speak, as Dr. Roosa had pretty effectually taken the wind out of his sails, by saying about what he himself would have said.

To speak in detail, the reader of the paper had astonished him by mentioning leeching as a violent measure, and one likely to do harm. With all the fairness possible, he would state the pros and cons upon the question. In the first place, leeching need not be a violent measure. The average American practitioner does not apply six to ten leeches, as many Continental surgeons do, about the ear, and exsanguinate the patient. One leech is often sufficient to secure all the local depletion that is necessary. Again, with reference to the pain and irritation produced by the leech-bite, if there was any apparatus in the world which made a clean, painless cut, it was the mouth of a leech. True, the bungling efforts of some people, in making subsequent applications to arrest the bleeding, might cause a return of the pain which had been previously arrested by the leech; but that could not be used as an argument against the measure. In what cases can leeches do harm, if blood sufficient to weaken the patient is not extracted? If there is a decided acute hyperæmia of the tympanic cavity, without any relaxation of tissue, a leech cannot possibly do harm. Again, you may have hyperæmia of the tympanic cavity associated with a relaxed condition of the tissues, and, under such

circumstances, the application of a leech may aggravate the pain, but in these instances opium settles the question at once.

He had had otitis too many times himself, and experienced too often the grateful relief from pain afforded by the application of a leech, to believe at all in their violence or liability to do harm when properly used. With reference to the use of the syringe, a very eminent writer on aural surgery had spoken of "the sloppy thraldom of the syringe," but he confessed to being under that thraldom, sloppy or otherwise. He admitted that if water was thrown into the tympanic cavity it might produce inflammation, and any violent syringing might do harm; but proper syringing of the ear was not injurious, especially if a small quantity of salt was added to the water. The mildest cleansing with cotton might inflict more damage than proper syringing in removing discharges, etc., from the ear. In acute inflammation of the tympanic cavity, when there is excess of pressure and great hyperæmia, attempts at inflation will cause pain, aggravate the sufferings of the patient, and should not be made. But often in acute inflammation the dense membrane may be a good deal sunken, and that condition of itself may give rise to pain. In such cases inflation may be practised with benefit. Occasionally he had seen pain caused by excessive inflation of the tympanum, even when properly done.

Dr. Pomeroy was glad to be able to coincide with the author of the paper upon one point, and that was with reference to Wild's incision. He had not made it for nearly a year, and yet he had seen mastoids swollen, reddened, pit upon pressure, but had had no trouble in relieving them by leeching. With reference to paracentesis, the point raised by Dr. Roosa was absolutely impregnable. There should be no question of the propriety of opening the membrane under circumstances such as Dr. Roosa had indicated. It could be done without difficulty, and he thought it unnecessary to use anæsthetics, except in children.

The author of the paper, however, astonished him beyond measure, by stating that he had not used leeches for years, and it seemed impossible to him that, of the large number of cases of acute inflammation with which he (Dr. Sexton) must have met, some of them had not required leeching. Dr. Sexton had spoken of his acute cases as relapsing frequently, and it was possible, he thought, that, had proper leeching been resorted to, such recurrence would not have been observed. It was his custom to leech the patient so long as he had a peculiar dull, aching pain, or a feeling of heaviness in the ear. He had never used the sulphide of calcium, but did not believe that it could bring about such remarkable results as had been said to accomplish. His assistant, however, had used the drug extensively, and the report had been that it was of no use whatever in the treatment of aural affections.

Dr. David Weber thought that all aural surgeons who had many cases of chronic suppurative inflammation of the middle ear to treat, were very likely to obtain, so far as possible, the entire history of these cases, and he believed his experience coincided with that of others, namely, that chronic suppurative inflammation of the middle ear, which is so difficult to manage, which we do not always succeed in curing even with the most protracted and faithful treatment, originates, in the vast majority of cases, in an acute inflammation which has received no treatment. He believed that there was a unanimity of opinion upon this point.

Again, aural surgeons had many cases of acute inflammation of the middle ear to treat, and he failed to recall a single case, at that moment, treated from the very first according to methods recommended in standard books, that resulted in *chronic* suppurative inflammation of the middle ear. He believed that the general experience of aural surgeons would bear him out in that statement.

He knew nothing concerning the treatment of these cases by the use of pulsatilla, sulphide of calcium, etc., and felt that he should insist upon seeing one or two cases treated in that way before abstaining from the use of warm-water douche, leeches, and opium, if necessary, to relieve pain. He knew that acute cases, without treatment, frequently resulted in a chonic inflammation almost impossible to cure.

Dr. Sexton, in reply to Dr. Burnett, concerning the influence of age, habits, etc., upon the use of the sulphide of calcium, said that it did make a difference as to whether the patient was old or young, so far as the dose was concerned; but he had not seen many cases, as yet, in which he thought the drug was contraindicated, and both old and young might take the remedy with safety when it was properly given. It was thought to be particularly efficacious in scrofulous subjects. With regard to the remarks made by Dr. Roosa, he was not disappointed at the gentleman's surprise at what he (Dr. Sexton) had read. He expected there would be some surprise at these measures; but he could say that no one was surprised more than himself when he made up his mind that we were prone to operate too much about the ear. He still believed that such work is overdone; that we have gone too far; and that it is well that we should take a step in the other direction. He did not say that he never used the knife, and that leeching should never be employed; but simply said that he had found it unnecessary to resort to these measures since he had adopted the plan of treatment already outlined. He thought that he had not allowed his patients to suffer from pain more than other surgeons, and as to the success of the treatment, the patients and the practitioner must judge.

He was surprised at the suggestion concerning homœopathy made by Dr. Roosa, and did not exactly understand what was meant by the statement. As he understood homœopathy, he failed to see any connection between it and his method of treating aural disease. Certainly, calcium sulphide, aconite, gelsemium, etc., were not remedies used by the homœopathists only nor specially. They had been used by regulars for years, and also in very small doses, and he was amazed that such a statement should have been made before a body of intelligent gentlemen. As to the use of calcium sulphide, and subsequent treatment by other practitioners, he thought it an improper subject for discussion.

The academy then adjourned.

Another Case of Recovery after Prolonged Immersion.—Dr. E. C. Carter, U. S. Army, writes: "The account given by Mr. Pope, in the *Lancet* for October 1, 1881, of a man who recovered after immersion in water for twelve or fifteen minutes, finds its parallel in a case which occurred off the coast of Long Island, in August, 1881. The patient fell overboard in an epileptic fit, and was brought to the surface about fifteen minutes afterward. He was resuscitated. Auscultation showed that very little water had been drawn into his lungs, owing, no doubt, to the epileptic condition.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 14, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

FLOATING CARTILAGES IN THE KNEE-JOINT.

Dr. A. P. Gerster presented two specimens of floating cartilage of the knee-joint, removed from two different patients, and exhibiting two varieties of floating bodies which are found in this joint. The first variety of these bodies is caused by traumatism. A particle of the joint surface is chipped off, and lies loose within the cavity. The other variety is one in which the floating body is produced by essential disease of the synovial membrane; it is a villous growth of the synovial membrane, parts of which gradually calcify, are detached, and become floating bodies. It is obvious that, having removed a floating body of traumatic origin and short duration, we shall be able to foretell a good cure and complete restitution of the functional ability of the joint. The prognosis of the villous variety of floating bodies is not so good by far; their removal is more difficult, involving a good deal of irritation of the synovial membrane, and even their complete removal does not insure against a recurrence of the disease. Yet we can say that the irrigation of the joint with a strong solution of carbolic acid during the operation may so influence the synovial membrane as to check the chronic state of inflammation that causes the proliferation of the membrane, and thus effect a radical improvement. The first of the specimens presented was of traumatic origin. On one surface it was smooth and cartilaginous; on the other it was rough, and presented a surface which apparently corresponded with the point of attachment. He was unable to say from which part of the joint it came. It was removed from a young man who fell from an elevation, and ever since the receipt of the injury he had noticed a foreign body in the knee-joint. Occasionally it became impacted between the joint surfaces, causing intense pain and acute inflammation, with extensive effusion into the joint. The patient came under Dr. Gerster's care in the German Hospital, in September last, where he operated for its removal. The operation was performed under complete antiseptic precautions. The joint was shaved, washed with ether and a carbolic acid solution. The floating body was then fixed by the fingers of an assistant on the inner aspect of the joint, where a semilunar incision was made through the skin, fascia, subcutaneous tissue, down to the capsule. The capsule was then incised close to the base of the semilunar flap, and the body readily removed. Quite a large quantity of sanguinolent synovia escaped from the joint. The synovial membrane was sutured with carbolized catgut, and the external incision was also closed with sutures. The wound was converted practically into a subcutaneous wound, because the incision through the skin and that through the capsule did not exactly correspond. Primary union followed, the man got up two weeks afterward, and subsequently regained full use of his joint.

In the second case the patient was a girl, fourteen years of age. The villous growth originated from that mass of connective and fatty tissue which is found below the patella and beneath the ligamentum patellæ proprium. There was no history of traumatism. Apparently, the synovitis was not caused by the presence of the floating body, but the latter was the consequence of an essential lesion of the synovial membrane. The patient was laid up nearly every ten or fourteen days, on account of the sudden development of pain and copious effusion into the joint. Several gentlemen by whom she was seen, at the instance of her family physician, regarded an operation for its removal as exceedingly dangerous, and advised against it. Dr. Gerster saw the patient early in December, 1881, with her family physician, Dr. Scharlau, and, upon examining the joint, found upon the inner aspect, at a point corresponding to the inner margin of the patella, several floating bodies, tolerably movable, but not entirely detached. He assumed that these bodies were attached upon the inner side of the patella, and proposed to remove them. It was apparent that the joint was suffering more and more in consequence of these bodies, and although the operation is a notoriously dangerous one, it was finally decided to have it performed, and it was accordingly done on December 5th. An incision was made upon the inner side of the joint, midway between the margin of the patella and the inner condyle, and care was taken to ligate every vessel before proceeding further, so that when the capsule of the joint was reached the wound was perfectly dry. A small incision was then made, about one centimetre in length, into the capsule, and one of these bodies was easily exposed and seized, and to his astonishment he found that it was connected with a large, clustering mass, which he was unable to remove on account of the small size of the first incision. He therefore enlarged the incision to the extent of an inch and a half, and turned the false growth out of the joint, the base of which was half an inch in length and half an inch in width, and the distance from the base of the growth to the tip was about one inch. It had a deep orange color, and was covered with a pannus of vessels. It was gradually separated by scissors. The hemorrhage was very slight. The joint was washed out with a five per cent. carbolic acid solution, and the joint wound was left partially open. Two drainage-tubes were introduced, between which the synovial membrane was sewed up, and finally the external incision was drawn together with six or eight sutures. A Lister dressing was applied, and also a dorsal plaster-of-Paris splint, in order to secure perfect rest to the joint. On the third day the first dressing was changed. There were no inflammatory changes about the wound, and the Lister dressing was again renewed. The elevation of temperature was very slight. On the fourth or fifth day the patient had a intense colic, which was believed to be due to her constipation succeeding the use of morphia, and entirely disappeared after the patient had a free evacuation from the bowels, produced by repeated enemata. The pulse also, which had steadily been high—120—diminished in frequency very remarkably to 80, after the first copious evacuation from the bowels. The dressings were changed on the 7th day. The drainage-tubes were removed and cleansed, shortened, and so applied as to merely keep the incision in the skin open, and the dressings were reapplied. These dressings were left on three days more, and day before yesterday he removed the drainage-tubes altogether. At the present time the joint presents a perfectly normal appearance. There was no irritation of the synovial membrane, and the secretion from the joint was actually none. Dr. Gerster intended to resume passive motion as soon as possi-

ble, and hoped to restore the joint to its complete usefulness.

In this connection he mentioned a third case of floating body, which was interesting on account of the cure effected by the patient himself. A young man, a laborer, had a floating body in the knee-joint, which was the result of traumatism. Dr. Gerster advised its removal, and directed the patient to enter the German Hospital. The man on his way to the hospital met with a friend, who advised him to use great force of extension whenever the piece became impacted in the joint, and told him that in that way he could break it up and cure himself. While walking to the hospital the floating body became impacted in the joint, and the patient followed the advice of his friend, and actually crushed it, so that when he reached the hospital the house surgeon was unable to detect any body whatever. On the following morning Dr. Gerster went to the hospital to arrange for the operation, and found that the body was gone. After the acute synovitis which was set up by this heroic method had subsided, the patient was cured, and was dismissed from the hospital without operation. Dr. Gerster had seen him within the last two hours, and he was unable to find the floating body, and believed that the patient had succeeded in crushing the cartilaginous mass successfully.

In view of the dangers attending this class of operations, he had the patient and the room in which the operation was to be performed specially prepared. The room was thoroughly cleansed, the carpets were removed, the floors were scraped, the walls were newly covered with whitewash prepared with a five per cent. solution of carbolic acid. All the wood-work was brushed, and new beds were furnished, and all persons coming in contact with the patient, the instruments, or the dressings, or anything in the room, had to be disinfected in the doctor's presence, and during the operation the usual antiseptic precautions were observed.

Dr. Robert Newman referred to a case in which a plan of treatment, similar to that adopted in Dr. Gerster's third case, was followed. The patient was a lad who fell upon a railroad track and struck his knee upon the rail, and from that moment he was unable to walk. The knee subsequently became stiff, and was constantly painful. Dr. Newman examined the joint carefully, as also did Dr. Frank H. Hamilton and Dr. Samuel Ward, both of whom concurred in his diagnosis that a portion of the joint had been chipped off and was floating in the cavity. The treatment which he adopted was to break up the adhesions completely, displaced the floating cartilage, brought it into a position where it could not do any harm, bandaged the knee, applied a dorsal splint, and kept the patient perfectly quiet. He remained in bed nearly four weeks. After that he had no further trouble with the joint. The injury was received six years ago, and the patient after his recovery remained well. Dr. Newman also referred to the cases which came under his observation eighteen years ago, in which he operated almost in the same manner as did Dr. Gerster in his second case. The incision was made, and with a little spoon the foreign body was poked out, and the patient made a good recovery. He believed, however, that floating cartilages in the knee-joint were always the result of traumatism.

REMOVAL OF THE GREAT TOE-NAIL.

Dr. Robert Newman then presented a great toe-nail recently removed by operation. It was partially dead, and had produced irritation sufficient to cause a very large sore. Against his usual method of treatment, he removed it, and since that time the irritation had entirely ceased. On inspecting the specimen, he discovered evidence that a new nail was rapidly growing, which caused him to regret that he did not adhere to his usual treatment.

FIBRO-MYXO-SARCOMA OF THE LARYNX.

Dr. L. Elsberg presented a specimen with the following history: Dr. M——, a German physician, seventy-four years of age, consulted him July 29, 1881. In early life he had sung a great deal, but fully thirty years ago his voice had become veiled, and he felt mucus accumulate in his larynx. About fourteen months ago he had an attack of strangling, ascribed by him to "a severe cold" and drinking very cold beer; since then his voice was reduced to a mere whisper. For six months he had felt some pressure on his larynx during deglutition, which had lately become painful. He breathed comfortably only in certain positions, had paroxysms of cough, and in sleeping could lie on the right side only. He had a sudden attack of dyspnœa two weeks before in Fulton Street, Brooklyn, caused by turning his head suddenly; he thinks this attack lasted fifteen minutes and nearly killed him. For an hour his breathing was very stertorous, and he expectorated bloody mucus for a much longer time. He was very much exhausted for several days, but gradually recovered. He thinks he breathes normally at present, but Dr. Elsberg noticed that he got easily out of breath during the examination. The laryngoscope showed a very large tumor attached to the right side of his larynx, projecting above the vocal bands. An operation was advised for its removal without delay. This being objected to, a prophylactic tracheotomy was proposed, on account of the large size of the tumor. All operative interference was refused.

During the month of August, with the exception of occasional more or less severe attacks of dyspnœa, the patient felt well and managed to attend to his professional engagements. Dr. Elsberg was very solicitous about his case, and sent him the message to prepare for the necessity of sudden tracheotomy. He never saw him alive again. On the morning of October 27th he left his house, in Eighth Street, to visit some patients. Toward noon he entered the room of a patient in One Hundred and Twenty-seventh Street, about six miles distant from his own residence. After removing his hat and gloves, he showed signs of suffocation; his gesticulations were misunderstood, and though a physician had been called, he died.

Two days later the autopsy was performed by Dr. M. Waterman, Deputy Coroner, to whose kindness Dr. Elsberg was much indebted. The larynx having been opened posteriorly, the tumor, of the size of an elongated small walnut, was seen occupying the whole right side, its middle portion at the level of the right vocal band. The tumor was slightly pear-shaped; its broadest part corresponding exactly to the median line of the larynx, the narrow portion horizontally tending toward the posterior wall. On closing the larynx, it was seen that the tumor completely filled its lumen. The broadest and highest portion pressed against the left ventricle, which was slightly widened. The tumor was lobate; the largest lobes corresponded to the broadest extremity of the tumor, the smallest ones were posteriorly. The anterior surface of the tumor was flattened and deeply fissured. Lengthwise, viz., in the direction of the

vocal band, it was divided by a very deep fissure into two almost equal portions, which were connected by a flat pedicle, which was the vocal band itself, projected into the tumor and attached in the depth of the fissure. The largest lobe, *i.e.*, that nearest to the median line, was embedded in the right ventricle, which, from the pressure against it, was considerably widened, more so than the left, and toward the middle line to such a degree that the ventricular band had completely disappeared. The tumor was of medium consistence, and of pale pink color, with numerous ramifying blood-vessels.

He had not yet finished its histological study, but could say that, under the microscope, it proved to be covered by stratified epithelium, underneath which there were bundles of fibrous connective tissue, enclosing large meshes of a myxomatous basis-substance. The main mass of the tumor consisted —at least at the place from which thin sections had been removed for examination—of a delicate reticulum, the meshes of which had a shining, nearly homogeneous basis-substance. Some portions, especially comparatively near the surface, were composed exclusively of a very little connective tissue, and the relatively large globular bodies, known to be characteristic of Virchow's "large, round-celled sarcoma." The tumor, therefore, was a specimen of fibro-myxoma which had lately become sarcomatous.

"The tumor must, of late, have grown rapidly, but there can hardly be a doubt that it could have been safely removed when I saw it, or even later. The life of the patient, who, despite his years, was in vigorous good health, could certainly have been prolonged either by the removal of the tumor or by simple tracheotomy. In the present state of our knowledge, and of our achievements in laryngology, such a death as the above ought not to take place, and it probably would not have occurred if the patient had not himself been a medical practitioner, strongly prejudiced against operative interference in his case."

NASAL DIPHTHERIA—BRONCHO-PNEUMONIA.

Dr. J. Lewis Smith presented one lung, the larynx, and the trachea, removed from the body of a child two years and eight months old, which died with the common history of diphtheria. In the latter part of October the child had a pharyngitis, but no pseudo-membrane had been observed. After the pharyngitis had continued for ten or twelve days the mucous membrane of the nose became inflamed, there was more or less obstruction to breathing through the nostrils, and the patient had persistent febrile movement, with corresponding acceleration of pulse, sometimes reaching as high as 140 or 150. No rash was observed, so that the diagnosis of scarlet fever was excluded, and, from the severity and persistence of the coryza, the diagnosis was made of nasal diphtheria. In a few days the physical signs of broncho-pneumonia occurred, and the cough began to be croupy and the breathing noisy. Inhalations of lime-water, with one-fortieth part of liquor potassæ, were administered, after which the obstruction to the respiration diminished somewhat. The evidence of pneumonic consolidation continued, and the patient died about a week after the commencement of the laryngeal obstruction. The child apparently died from general exhaustion as much as from the dyspnœa. At the autopsy there was found a thin film of membrane extending along the larynx and over the tracheal surface. It was intimately blended with the laryngeal mucous membrane, but it lay upon the tracheal surface without penetrating it. The point of special interest in the case was a therapeutical one. At the New York Foundling Asylum some experiments had been instituted with a view to determining what is the best

SOLVENT FOR PSEUDO-MEMBRANES,

and, at the same time, such as could be safely used by inhalation. As the result of the experiments the two which had been found to be the safest and most efficient solvents were the liquor potassæ and liquor sodæ, in the strength of two or two and one-half per cent. of water. That is, liquor potassæ, or liquor sodæ, one part to forty or fifty of water. These remedies could also be used in combination with lime-water, and they could be employed at the same time both in the boiler and cup of the steam-atomizer. Dr. Smith also stated that, as the result of observations and experiments made in the same institution, lactic acid, with the acidulated liquid pepsin, had not been found to be so good a solvent as even the officinal lime-water.

Dr. L. Elsberg remarked, with reference to solvents, that they operated much differently on the inside than upon the outside. He had found bromine to be much more efficient than either lime-water or lactic acid, or liquor potassæ, or liquor sodæ.

Dr. Smith asked if bromine, used as an inhaltion of sufficient strength to dissolve membrane, would not be too great an irritant.

Dr. Elsberg said that, used properly, it did not produce irritation. He uses one grain of bromine with one drachm of iodide of potassium, in one ounce of water, which could be poured into a cone, and the patient inhale the fumes. And he had found that it dissolved the membrane outside beter, and, apparently, inside better than either limewater or potassa or soda.

The society then went into executive session.

The Governor of New York upon the Utica Insane Asylum.—The Governor, in his recent message, has the following regarding the Utica Insane Asylum:

"Complaint is made, on behalf of the State Board of Charities, against the managers of the State Asylum for the Insane at Utica, for neglecting to report, as required by law, a detailed and classified statement of expenditures. Compliance with this statutory provision is essential to a intelligent comparison of the management of the several like institutions, and should be rigidly enforced. It is certainly not creditable to the officers of the Utica Asylum that this plain duty has been so long disregarded."

It is said in reply to this that other insane asylums have failed to report.

The Governor gives the following table, showing the increase in our insane:

"The constantly increasing number of insane persons is exhibited by the following statement of the number of inmates of the various State and local asylums, poor-houses, and private asylums for the past five years:

"October 1, 1881, 10,05[illegible]; October 1, 1880, 9,537; October 1, 1879, 9,015 October 1, 1878, 8,781; October 1, 1877, 7,921.

"The new asylum for the insane, located at Binghamton, has been brought into use during the past year, and already contains a considerable number of patients."

Correspondence.

THE MORAL CHARACTER OF TRANCE SUBJECTS.

To the Editor of The Medical Record.

Sir: It is a rule of my life, from which I rarely depart, to hold no public discussion on scientific subjects with non-experts. The excellent and amiable Englishmen, authors of the recent letters in regard to my experiments in Europe, must therefore look to other sources for answers to their very amusing inquiries.

I feel it, however, to be my duty to say a few words against the extraordinary, though unintentional, attack made upon Dr. Charcot by Dr. Bucknill. The exact language of Dr. Bucknill is: "I should be indeed surprised if the accomplished physician (Dr. Charcot) who was investigating them had been willing to eliminate the moral character of each patient, as no factor in the case." If there is any truth in this charge, then Dr. Charcot is both a non-expert and a fraud; for he has both publicly and privately contended for the genuiness of his trance experiments, on the same ground that Dr. Hammond and I do, namely: *his own private study of the phenomena by numerous and repeated tests, in which all the sources of error have been eliminated.*

Such was his position when, three years ago, he showed me his cases, allowed me to experiment with one of them, and discussed this very question; such has been his position in his public lectures; and such is the position in Richer's work on "Hystero-Epilepsy" (pp. 579 et seq.), which these trance researches make an important feature. Such, also, was his position but a few weeks since, when he exhibited his cases to one of our American physicians; and such is the position which in future all who aim to know anything of this subject will take, and without argument. *The physician who, at this late hour, after all the revolutionary advance that has been made in the study of human beings, inquires into the moral character of those on whom he experiments, however wise and mature he may be on other themes, is on this theme but a child—as much behind the age as he who should use inoculation instead of vaccination, and he should wait to grow before he expresses in public any opinion on either side.*

It is well known, and has been publicly stated, that the individuals on whom Dr. Charcot experiments would scarcely be acceptable candidates for teachers in Sunday-schools; but, whether these special charges be true or not, it is to the glory of Charcot—for which he will be remembered long after his other labors and the names of his non-expert opposers are forgotten—that he has taken these emotional and wretched women, these waste products thrown off in the evolution of the race, and has so experimented with them as to produce results as clear, as true, and as pure as the chemist can obtain with the inanimate elements in the laboratory.

Serious mistakes of inference Dr. Charcot has certainly made, and is making now; and for these no one has criticised him more earnestly or in a more public manner than I have; but none the less do I respect him as a man of genius and a man of honor, who does not deceive, but tells the exact truth when he says that the genuineness of the trance phenomena, as studied by him, is established by *his private experiments.*

If he does depend on the character and history of his subjects, and should so declare and confess, then his experiments are not worth exhibiting to scientific men, or publishing to the scientific world.

The worst cases of sham trance I have ever seen have been in men and women whose moral character and position have been in other respects unimpeached. If we do not know whether the phenomena are genuine before we inquire as to the character of the subject, we shall not know after, whatever the result of the inquiry may be.

I would take this occasion, in reply to inquiries that have been privately made by those who are taking pains to inform themselves in regard to this side of the nervous system, that of the general honesty of my trained subject, I know and care nothing; *of his honesty in relation to the trance experiments*, however, I have better proof than I have of the honesty of any one who witnessed the experiments in Europe or America; that, on the average, he did quite as well there as here; sometimes succeeding, sometimes failing, sometimes succeeding in part only, as is often the case with genuine subjects; that he never did better than in some of his experiments on the day that has given rise to the discussion; that, with perhaps three or four exceptions, he was the best subject I have ever seen—among the nearest approaches being the thoroughly trained subjects of Charcot, which, however, are trained *physiologically*, mainly by the method of Braid, in which expectation is only one factor, while mine are trained *psychologically*, wholly through the emotion of expectation; that the experiments were received—on the part of those who are making themselves experts in this direction—with the highest conceivable interest, surpassing that which has been accorded to any subject that I have had the pleasure of bringing to the attention of physicians in Europe, either in this year or in previous years. While some of the phenomena were old, others were in detail comparatively new discoveries, and, as such, were appreciated. After those who are studying these topics had opportunity for private examination of the case, a portion of a day was devoted entirely to non-experts, who were invited for the same reason that they were invited here, and in the expectation that some of them might be inspired to begin the investigation of this side of the human system for themselves, as indeed has been the case in America and Europe.

I would here defend England against herself, or rather against some of her representatives. With one or two exceptions, the distinguished and able medical gentlemen who witnessed the experiments on the non-experts' day, were gentlemanly, considerate, and attentive; the arguments, queries, doubts, suspicions, and difficulties that were raised among them were precisely those that have been gone over and over again by scores of American physicians in my office, and in public experiments in America. Non-expertness, indeed—like small-pox—has the same symptoms in all countries. We cannot expect children to reason like adults; and we cannot hope that non-experts will see with expert eyes, but must give them, little by little, the alphabet of science, and not become impatient if, like children, they ask questions that are elementary and imperfect, and our answers are not understood. We are not to ask them to apologize, but simply wait for them to

mature; an infant class in psychology is not to be judged by the standard of disciplined philosophers. Merely seeing trance experiments gives one no more knowledge of trance than seeing the captain of a ship taking observations makes one a navigator. Dr. Bucknill's conclusions, from witnessing Dr. Elliotson's experiments, that some of them were genuine, is as worthless as his conclusion that some of them were simulated. Even one who knows something of the subject—even the very highest expert, may not be able to tell from seeing these experiments whether they are or are not genuine.

The trained subject used in London is now in this city, and any one interested can have the opportunity of convincing himself by private experiment of his honesty.

I have been many times interested and aided by witnessing experiments and operations in departments in which I was an utter non-expert, since I have been stimulated thereby to a study of the subject. It is not an insult, but a compliment to a man to call him a non-expert; for the term implies that there may be some subject on which he is an expert.

In England as in America, and everywhere, the difficulty in these and allied matters is not so much moral as intellectual; our critics are oftentimes as sincere as ourselves, and quite as earnest, doing their best duty according to the light that God gives them; gallant, generous, and noble natures oftentimes, whose friendship is a possession, but who—from long living in an atmosphere that is a non-conductor for new ideas—become antidotes to science rather than its adjuvants; they prefer to be islands, standing still in the midst of the stream, than ships moving with it; though they would tread softly on a worm, they would banish genius from the universe.

It was not viciousness, but simply Anglo-Saxon non-expertness—a special and scientific term for what Mr. Matthew Arnold calls "Philistinism"—which, stimulated by conscience and armed with power, persecuted Jenner, and now, with yearly increasing strength in Europe, opposes vaccination; forced Ferrier into the police court, and, under sanction of a most cruel law, which even medical men and medical journals allowed themselves to approve, drives from Great Britain its best men of science as the Huguenots were driven from France; declined a paper from Mr. Braid on some of the most important scientific researches of the century, and then, forty years later, must send to Germany for Professor Preyer to explain what Mr. Braid had vainly sought opportunity to explain; whereupon hours are spent in praising that same Mr. Braid, without clearly knowing either what he did or did not do for science; which, in our own country, refused permission to Dr. J. K. Mitchell to read an essay so classical that—despite its errors—the experts of the future must quote it; ordered Dr. Clymer and his friends to stop investigating science, or stop practising medicine; and resolutely snubbed Dr. Austin Flint when he wished to present to the American Medical Association the strongest and most original contribution he has ever made, which Professor Schiff confirmed and the French Academy gladly received.

The advantage of having some knowledge of the subject of which we write and speak, even in matters of science, is so great, that one is amazed to hear a non-expert speak on this subject at all, save with muffled lips and bated breath; but it is the very nature of non-expertness not to know that it does not know, and in dealing with experts to mistake calmness for weakness, and silence for consent to delusions.

In closing, I would congratulate experts, partial experts, and experts in making, of both Europe and America, on the auspiciousness of the time in which they enter upon and continue their studies. As a result of the efforts of many pioneers, the study of these phenomena of the nervous system has at last been made both fruitful and safe. Before I reached England this year, some of the most important and incredible of my experiments in this department of science had been confirmed by a number of well-known English psychologists, and, in the handsomest way possible, acknowledgments of priority had been publicly given in their leading scientific journals. The details, as gathered from *Nature*, will soon be republished in America. The excellent paper and experiments of Dr. Mills, before the Medical Society of Philadelphia, and the intelligent discussion thereof, as reported in the *Medical Times* of November 19th, would have been impossible five years ago, and would have been impossible to-day, except in America and Germany.

Observe the normal evolution of our ideas on this theme: the long and dreary stage of cold indifference has passed already; the short, hot stage of opposition is rapidly passing; the third and last stage, through which all scientific truth must pass—the stage of contests of priority—is near at hand. For the discussion of this the highest expertness of both hemispheres is invited, and, as I predict, will soon be enlisted.

GEORGE M. BEARD.

NEW YORK, 1881.

CONCERNING A CASE OF DERMOID CYST OF THE OVARY.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In your recent issue I notice a report of a "Case of Ovarian Pregnancy—Autopsy," by Dr. S. Mitchell, Jr., of Hornellsville, N. Y., "in which the trouble was not diagnosed before death." From the history of the case, and particularly from the results of the autopsy, it seems to me that the diagnosis was not even made after death, and that the true nature of the case was most strangely misunderstood by the physicians present on that occasion. There was nothing whatever in the history, as reported, which could justify the suspicion that the abdominal enlargement was due to pregnancy but the cessation of the menses for five months, which, no doubt, was merely incidental. But the appearances found at the autopsy should have sufficed to convince everyone present that it was not an extra-uterine pregnancy, but a simple dermoid cyst of the ovary, for which condition the contents of the sac—the "large incisor tooth, a small piece of bone, and a piece of hairy scalp, all attached to the inner surface of the sac," also the "loose, floating hairs, some of which were ten inches in length," which were found in the pus contained in the sac—were absolutely characteristic. That the tooth, piece of bone, and piece of hairy scalp were "all attached to the inner surface of the sac by means of a triangular fleshy mass, resembling a rudimentary placenta," proves nothing to the contrary, since the mere re-

semblance in outline to a placenta does not necessarily denote a resemblance in structure.

Inasmuch as cases of undoubted ovarian pregnancy are so rare that Spiegelberg, while reporting an unquestionable case (see *Archiv. für Gynäkologie*, vol. xiii, 1878), found himself compelled, after careful sifting, to reduce the cases published as such to *ten*, including his own. I think it worth while to occupy your valuable space for the purpose of making this correction. From the evidence, I can but consider the case one of suppurating dermoid tumor of the ovary, of which there are many on record. Yours truly,

PAUL F. MUNDÉ.

NEW YORK.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 14, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 7, 1882.	0	9	271	6	177	148	39	0
Jan. 14, 1882.	0	10	278	3	202	128	31	0

U. S. MARINE HOSPITAL SERVICE AND SMALL-POX. —In view of the prevalence of small-pox at various points in the West, Surgeon-General Hamilton, of the Marine Hospital Service, has issued orders to his subordinates at Cincinnati, Louisville, Cairo, and St. Louis, to vaccinate, without charge, all steamboat men on the Ohio and Mississippi Rivers who may apply for vaccination, without regard to the usual requirement of a certain length of service.

DR. T. W. MILLS, L.R.C.P., London, has been appointed assistant to the Chair of Physiology, McGill Medical College, Montreal.

ERGOTINE IN ERYSIPELAS.—Mr. Kenneth W. Millican used ergotine, locally, in an outbreak of facial erysipelas in his practice with the best results. The relief to heat and pain, the reduction of swelling, and the rapid subsidence of the disease, were most remarkable.—*British Med. Jour.*

BANQUET TO MR. SPENCER WELLS.—The surgeons of Paris recently gave a banquet in honor of Mr. Wells.

SUCCESSFUL GASTROTOMY.—Mr. Marshall, of London, recently performed gastrotomy for a case of malignant disease of the œsophagus. The patient is doing well.

GASTROSCOPY.—Dr. Mikuliez recently demonstrated the œsophagus and stomach before the Vienna Medical Society with his gastroscope. This instrument has been perfected by the addition of a tube through which the stomach may be distended with air, and thus examined more completely.

PILOCARPINE AS A STIMULANT TO THE MOVEMENT OF THE STOMACH AND INTESTINE.—M. Morat has shown that a dose of two milligrammes of pilocarpine stimulates powerfully the normal movements of the stomach and intestine in a dog. Atropine antagonizes this action.

A SOCIETY FOR THE DEFENCE OF SCIENTIFIC RESEARCH has been organized in London. It is to fight the anti-vivisectionists.

CARTWRIGHT LECTURES.—The second course of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons will be given by Professor John C. Dalton, at Association Hall, corner of Twenty-third Street and Fourth Avenue, on Tuesday evenings, January 24th, 31st, and February 7th. Subject of the course: "The Experimental Method in Medical Science."

Lecture I: Galvani and Galvanism, in the Study of the Nervous System. Lecture 2: Buffon and Bonnet, in the Eighteenth Century. Lecture 3: Nervous Degenerations, and the Theory of Sir Charles Bell.

DR. MATTHEW D. MANN, of Hartford, has been called to deliver a course of lectures on Obstetrics and Diseases of Women and Children in the Buffalo Medical College in the place of Dr. White, deceased. Dr. Mann will be absent from Hartford about eight weeks.

THE RECORD OF CONTAGIOUS DISEASES reported to the Board of Health in the year 1881 is as follows:

	No. of Cases.
Typhus fever	568
Typhoid fever	969
Cerebro-spinal meningitis	555
Scarlet fever	7,318
Diphtheria	5,065
Measles	5,230
Small-pox	1,201

THE COMMITTEE OF THE GARFIELD MEMORIAL HOSPITAL have received a bill of exchange for $400 from the Khedive of Egypt through Consul-General Wolf, who writes that he expects to supplement this with further subscriptions to the amount of $1,000. Minister Morton, at Paris; the American Exchange, at London; and the American Consuls at Amsterdam and elsewhere, are also receiving subscriptions for this object.

VISCUM ALBUM AS A SUBSTITUTE FOR DIGITALIS.—Dr. R. Park, in the *Practitioner*, commends the use of mistletoe as a very efficient substitute for digitalis in diseases of the heart. He gives half a drachm of the tincture every four hours.

VEGETABLE PATHOLOGY. — Over a year ago Sir James Paget called attention to the interest and profit that might be obtained in a study of vegetable pathology. A contribution to this subject has been made by Mr. W K. Higley in a series of articles in the *American Naturalist* for November and December, 1881.

THE INFANT ASYLUM of this city has been found in such an unsanitary condition that it has been ordered closed by the Health Board.

BELLEVUE NURSE TRAINING SCHOOL.—At the ninth annual commencement of this school, held January 17th, twenty seven young women graduated. Professor Flint delivered the annual address.

NEW USE FOR MUSTARD.—The matron of a Children's Home, in Montreal, Canada, has been in the habit of using mustard poultices for the punishment of those under her charge. The counter-irritating effects are somewhat similar to, but more lasting than, those from the time honored systems of spanking. After the poultice treatment the child does not enjoy a seat for a week.

Triplets.—Dr. J. E. Moith, of Fishkill, N. Y., reports a case of triplets in his practice. The first child presented by the head, and was delivered with the forceps, the second presented by the foot, and the third was also a head presentation. The first was a girl, and the remaining two were boys. They weighed respectively seven pounds two ounces, six pounds six ounces, and six pounds four ounces. The mother is a colored woman, aged thirty-four years, suffering from phthisis. With the late addition to her family, she has now nine children alive and well. There is no suspicion of impairment of health in the father.

Neurology and Psychiatry.—With February next, begins in this city a new quarterly journal devoted to the above subjects, and edited by T. A. McBride, M.D., assisted by Drs. L. C. Gray and E. C. Spitzka.

The Medical News.—Our excellent contemporary, the *Medical News and Library*, of Philadelphia, has been changed into a weekly.

Prevention of Lead-Poisoning.—Dr. A. Huntington, of this city, writes: "While perusing the article in the Record of the 7th, relative to the use of 'Ergot in Lead-Poisoning,' and noting the statement of Dr. Stiles as to the great frequency of this form of poisoning among silver-workers in Nevada, my mind reverted to the prophylaxis against lead which the late Professor Draper used to teach us in his chemical lectures, viz., that a weak lemonade of sulphuric acid, partaken of at reasonable intervals by workers in lead, would go far toward neutralizing the poisonous effects of absorption, by combining with the lead in the system, and producing the inert sulphate.

"If this is a fact, could not the lead-workers be brought to feel that more of this sort of lemonade and less whiskey would inure to their good?"

The Trial of Dr. Lamson for the murder of his brother-in-law, and against whom a verdict has been brought by the coroner's jury, has been exciting much interest in medical and social circles in London. Dr. Lamson was in attendance upon his brother-in-law at the time of his death. The suspicious points are that the patient died a few hours after Dr. Lamson had given him some powdered sugar in a gelatine pill-case—aconite has been detected as the leading cause of death; the prisoner purchased aconite shortly before—and the boy's death gives the prisoner's wife some $15,000 or $20,000. Added to this, it is shown that the prisoner was impecunious at the time. His answer, or that of his witnesses, has yet to be heard. Dr. Lamson graduated in medicine at Paris in 1870. There is written after his name in the "Medical Directory," L.R.C.P., Edin., and L.M., 1878; L.R.C.S., 1878. He is a member of the British Medial Association. He was senior assistant surgeon in the French Ambulance Corps in 1870-71, where he received bronze and iron crosses; surgeon in the Servian army in 1876-77, where he received a gold cross and medal, and was surgeon-major in the Russian service. He has always been highly esteemed socially and professionally.

New York Pathological Society.—At the anniversary meeting held January 11, 1882, the following officers were elected for the ensuing year: *President*, Dr. E. C. Seguin; *Vice-President*, Dr. George L. Peabody; *Secretary*, Dr. Wesley M. Carpenter; *Treasurer*, Dr. John H. Hinton; *Editor*, Dr. John C. Peters; *Members of the Committee on Publication*, Drs. Beverly Robinson and Edmund C. Wendt; *Committee on Admissions and Ethics*, Drs. Virgil P. Gibney, F. R. S. Drake, John H. Hinton, John H. Ripley, and John C. Peters.

A Marble Bust of Dr. Protheroe Smith, the founder of the Hospital for Women, Soho Square, London, the first of its specialty, was recently presented to the institution by friends and patients, and was unveiled recently by Sir Rutherford Alcock, K.C.B., the chairman of the committee, on being placed in position in the hall of the hospital. The work has been well executed by Mr. Belt.

New York Ophthalmological Society.—At the Eighteenth Annual Meeting of the New York Ophthalmological Society, the following officers were elected for the ensuing year: *President*, Dr. Thomas R. Pooley; *Vice-President*, Dr. George R. Cutter; *Secretary and Treasurer*, Dr. W. Oliver Moore; *Committee on Admissions*, Drs. Arthur Matthewson, Charles S. Bull, and Edward T. Ely.

The News Has Reached Spain.—Our Spanish friends, to judge from articles in our Spanish contemporaries, seem to have at last awakened to a sense of the importance of salicylic acid in rheumatism.

Strangulation of the Penis by a Screw-Nut.—In the *Revista Medica de Chile*, Dr. San Cristobal details the operative procedures employed in a case of strangulation of the penis. The patient was a boy, eight or nine years of age, and in good health. Two days before admission, a laborer, during a fit of drunkenness, had thrust the child's penis in a screw-nut, which remained at the root of the member, resisting all attempts at removal. The organ became œdematous, turgid, livid, and its diameter increased to about an inch and a half. The boy had not voided urine for thirty hours, and the bladder formed a tumor extending to the umbilical region.

A longitudinal incision was practised along the dorsal aspect of the penis from the strangulating body to the free border of the prepuce, involving the skin and cellular tissue, and exposing the corpora spongiosa. Two incisions of equal length and depth were then carried along the sides of the member. Considerable bloody serum escaped, and pressure further facilitated disingurgitation. Nevertheless, traction still proved futile in removing the constricting body.

Taking up the free border of the prepuce, corresponding to the dorsal flap, the operator dissected the slip down to the level of the screw-nut, with the right hand exercising gentle forward traction upon the latter; with the index and the middle finger of the left he drew the skin of the pubis and root of the penis backward and upward. By degrees, and without the employment of great force, the skin of the flap was drawn entirely through the central opening. This being done, the great mobility of the subpreputial tissue facilitated the passage of a large part of the prepuce behind the constricting body, which was now readily removed, after little traction. Urine was voided in large quantity, and the bladder completely emptied.

The flaps were then placed in position and dressed with lint moistened with carbolized glycerine. Diet, rest, and laxatives were prescribed. Next day the general health was satisfactory, the wounds presented a favorable aspect, and the urethra was uncontracted. The flaps were then sutured together, and ten days after cicatrization was complete.

Original Lectures.

THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE.[1]

By JOHN C. DALTON, M.D.,
NEW YORK.

LECTURE I.

GALVANI AND GALVANISM IN THE STUDY OF THE NERVOUS SYSTEM.

Mr. President and Gentlemen of the Alumni: In discharging the agreeable duty which you have kindly imposed upon me, of giving the Cartwright Lectures for this year, I propose to offer a few historical sketches, which shall illustrate the manner in which certain parts of our scientific knowledge in medicine have been attained. The connection between scientific and practical medicine is furthermore so close that permanent improvement in the one is inseparably dependent on that of the other; but this connection becomes much more apparent when we trace the history of any particular department for a considerable period of time. By this means we can see how much of the doctrine accepted by our predecessors has survived the ordeal of a century; and what were the methods of investigation which produced in their hands the permanent results which we enjoy to-day. However much we may pride ourselves on the advances made during our own time, we may be sure that by far the greater part of our actual knowledge is a legacy from the past. It has been winnowed in successive generations from the errors and imperfections which always accompany its first acquisition; and it is probable that many of our own discoveries will require a similar depleting treatment in the future. But we may learn to rely with confidence on such methods of study as have heretofore proved valuable; and we may, perhaps, save ourselves the trouble of exploring certain paths, when we see that others have followed them before and have found that they lead nowhere.

If we can say that any one department in physiology, pathology, and therapeutics, is now distinguished by a special activity of investigation and growth, it is probably that of the nervous system. A very large part of this advance has been made by the application of electric stimulus in determining the motor or sensitive properties of different nerves, their influence on the heart and blood-vessels, the localization of special centres in the brain and spinal cord, or the diagnosis of morbid alterations in the cerebro-spinal axis; and the use of electricity in restoring the power of movement or sensation when impaired by disease is now acknowledged to be, in many cases, a most serviceable means of cure. This has all come, directly or indirectly, from the experiments of Galvani, nearly a hundred years ago, on the nerves and muscles of the decapitated frog.

In 1789, Galvani was Professor of Anatomy in the University of Bologna. In addition to the regular duties of his professorial chair, he had made a number of valuable investigations in comparative anatomy, such as those on the structure of the kidneys and urinary ducts of birds, and on the organ of hearing in the same class. Like most of the scientific men of his day, he was also greatly interested in the phenomena of electricity, which was then fast developing into an important department of physics. The condition of electrical science at that time was as follows: the machine for producing frictional electricity by a rotating glass cylinder and cushion had been brought to practical completion and was in common use, with its prime conductor and insulating supports. The two opposite kinds of electrical excitement, known as vitreous and resinous, or positive and negative, were fully recognized, as well as the distinction between conductors and non-conductors; and even some of the phenomena of induced electricity were known, though explained in a manner somewhat different from that which is now in vogue. Besides the electrical machine, experimenters were already in possession of the Leyden jar, by which a large quantity of electricity may be stored in a given space; the electrophorus, by which a moderate charge of electricity may be obtained at will from a permanent source; several varieties of electrometers or electroscopes, for detecting the existence and amount of slight electric disturbances; and Volta's "condenser," in which small quantities of electricity from a feeble source might be accumulated and made apparent by the electrometer. Finally, Franklin had shown, by his daring experiment with the kite in the thunder-storm, that the lightning of the clouds was identical in its nature with the spark from an electrical machine; and this had largely directed the attention of investigators to the study of atmospheric electricity as compared with that produced by artificial means.

Considering the long list of results which have followed from Galvani's early observations, the manner in which they were first made is a topic of much interest.[2] He was in his laboratory, engaged on experiments with the electrical machine, and had, lying upon the table near by, a freshly dissected frog, prepared for some other purpose in such a way that the denuded hind legs were connected with the spinal column by the crural nerves. One of his assistants, accidentally touching the nerves of the animal with the blade of a scalpel, saw the legs convulsed, and, on watching more closely, it was seen that the contraction occurred only at the moment of drawing a spark from the conductor of the machine. Once Galvani's attention was attracted to so remarkable a phenomenon, his mind turned instantly to the investigation of its conditions. He abandoned all other occupations, and seemed absorbed in the attempt to detect its causes and to learn their mode of operation. He determined, in the first place, that the discharge of the conductor and the contact of the scalpel with the frog's nerves were both necessary—for the muscular contraction would not take place with either of them alone. But, even when both conditions were present, sometimes the muscles contracted and sometimes they did not. Puzzled by this variation, but still confident that it must have a reasonable cause, he at last found that it depended on the way the scalpel was held in the fingers. If grasped by the end of its non-conducting ivory handle, there were no convulsions in the legs when the spark was taken from the machine; but if held in such a way that the fingers touched the steel blade, or the rivets which held it in place, the mus-

[1] Being the Second Course of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons, New York. Lecture I. was delivered in New York, January 24, 1882.

[2] Aloysii Galvani de Viribus Electricitatis in Motu Musculari Commentarius. De Bononiensi Scientiarum et Artium Instituto atque Academia Commentarii. Tomus septimus, p. 363. 1791.

cles were always thrown into action. The human body, therefore, served as a conductor, and Galvani replaced it with success by an iron wire, which he attached by one extremity to the spinal column, above the origin of the nerves, by a brass or copper hook, leaving the other end in communication with the ground. Then he could dispense with the scalpel altogether. He varied the contrivance in many ways, turning sometimes the attached and sometimes the free end of the conductor toward the electrical machine, increasing or diminishing its length, and at last adding a second conductor attached to the muscles of the leg. He took especial pains to exclude the possibility of any direct transfer of electricity from his machine to the dissected frog, and yet convinced himself by the aid of Volta's electrometer that in some way or other an electric discharge passed through the frog, and was the exciting cause of its convulsions.

These experiments were all performed with artificial electricity obtained from the electrical machine. Galvani then passed to his second series of observations, to see whether a similar effect would be produced by atmospheric electricity. On the approach of a thunder-storm, he arranged one of the conducting-wires so that its upper extremity was in the open air, near the roof of his house, and its lower extremity connected with the frog's spinal column, while the other wire, attached to the muscles of the leg, communicated below with the water in a well; and he then waited, like Franklin, for the discharge of a thunder-cloud. The result followed as before, and every peal was accompanied by a convulsive motion in the dissected frog. He especially noticed that the convulsions were simultaneous, not with the sound of the thunder, but with the electric discharge; for, as he says, "the muscular contractions and movements of the animal, like the visible splendor of the lightning-flash, always preceded the thunder-clap, and, as it were, gave notice that it was coming."

So far, Galvani had not really touched upon his final discovery. The phenomena of muscular contraction in these two sets of experiments were due, as we now know, to the action of induced electricity. When he charged the prime conductor of his electrical machine, or when the thunder cloud was passing over his house, an imperceptible, but real, disturbance of the electric equilibrium took place, by induction in the wires attached to his dissected frog; and, when the original electrical tension expended itself in a discharge, there was a similar reaction in his conducting-wires, a reaction which necessarily passed through the nerves and muscles of the frog, and threw it into convulsions. Galvani did not understand this, but he was engrossed with the idea of pursuing the new fact which he had unexpectedly witnessed, and of following its investigation by whatever path might be open to him. So it happened that he was led, in his third set of experiments, to a result of far greater importance; and notwithstanding that the two former series had nothing to do with this result, so far as the nature of their phenomena were concerned, they were still the necessary and perfectly natural preliminaries to its discovery.

Galvani knew that the violent disturbances of thunder and lightning were not the only ones which take place in the atmosphere, but that there were also other changes of electrical condition going on more quietly in ordinary weather. "After having tested," he says, "the action of atmospheric electricity in thunder storms, I was exceedingly desirous of investigating it in its daily condition of quietude and serenity." For this purpose he hung his freshly dissected frogs, by copper hooks attached to the spinal column, from the iron railing of a balustrade about his house, and left them there exposed to the sky. He thought that perhaps the imperceptible exchange of electricity between the clouds and the atmosphere might be betrayed by some movement in the frogs' limbs, and he watched patiently with that object for several days. But there was not the least indication of muscular excitement. At last, seeing that nothing further would come of the experiment in that way, he shifted the position of the limbs, and pressed them, still hanging by their hooks, against the iron framework of the balustrade, and instantly a convulsion took place. He had made a galvanic circuit. The copper hook and the iron railing were the two metals of the battery, and, by bringing the muscles in contact with the railing, he had completed the communication, and had seen, for the first time, a muscular contraction excited by the galvanic current.

But of course his knowledge of the real cause of the contraction was still very incomplete, and no one could be more conscious of this than himself. He knew how many sources of error there may be in drawing a conclusion from visible facts, until they have been examined from every direction. His most natural inference, if he had remained satisfied with this experiment, would have been that the electrical cause of the contractions came from the atmosphere. "I was very much inclined," he says, "to attribute these contractions to atmospheric electricity which had accumulated in the frog, and was then suddenly discharged by the contact of the hooks and railings, never having seen contractions produced in this way except in the open air, *as I had not yet tried them in any other place*—we may be so easily misled into thinking that we have really seen whatever we hope or expect to see." But he soon found that he could obtain the same results in his closed laboratory as well as in the open air, at any time of the day, in any weather, and under a great variety of conditions, provided only that communication was made between the nerves and muscles by metallic conductors, with no intervening non-conducting material. The best arrangement was that in which the nerves were suspended by copper hooks or armed with tin-foil, while the denuded feet of the frog rested on a silver plate, and the two were then connected by a metallic arc. The human body, being also a conductor, might be interposed between the ends of the arc without lessening the result. Galvani's description of this part of the discovery is an interesting episode, as it corroborates his proof of the electric nature of the force in operation. He found that if he held the frog suspended by its copper hook in one hand, and touched the silver plate with a metallic rod in the other, the frog was convulsed. Then he called in the assistance of a colleague. "I was staying," he says, "at the country-house of the most noble and excellent Signor James Zambeccari, where Signor Rialpo, of Spain, formerly a member of the Society of Jesus, and a very learned man, was visiting at the same time. He had already kindly aided me in former experiments, and I begged him to do so again in this instance. He accordingly took my place in holding the frog, while, partly for convenience and partly to vary the conditions of the experiment, I myself touched the silver plate with my metallic rod. But, contrary to

expectation, no movement was produced." Then the two observers joined hands, and, on repeating the metallic contact, found "to their delight" that communication took place through the human electric chain, and was manifested by muscular contraction in the frog's leg. From all these results the conclusion became irresistible that the convulsions previously observed in the frogs attached to the iron railings were due to the contact of their metallic supports.

It is perfectly evident that this third set of experiments contained the substance of a new discovery, and Galvani fully recognized the fact. In the two former series there were external sources of electricity, either in the electrical machine or in the thunder-clouds of the atmosphere. But here all such conditions were excluded. There was nothing to explain the phenomena but the frog's nerves and muscles, and the metallic conductors between them. In all Galvani's experiments his mind was forcibly impressed by this fact, and he was naturally led to suspect that the electricity which caused the convulsions might be derived from the animal body itself.

He made many attempts to determine which of the two kinds of electricity was produced in the nerves and which in the muscles, thinking that one of these tissues would naturally be positive and the other negative. But he finally considered the electricity to be distributed on the exterior and in the interior of the muscle, very much as it is on the outer and inner surfaces of a Leyden jar. The nerve, with its ramifications, leading from the interior of the muscles, he regarded as analogous to the chain and knob of the Leyden jar, and when it was connected by a metallic arc with the exterior of the muscle, the animal electric battery was discharged, and a convulsion ensued from the stimulus of the shock.

In this way Galvani accounted for the phenomena witnessed in his experiments. He was far from believing that he fully understood all their relations; but he was convinced of their importance, and had no doubt that their obscurities would disappear on further investigation. He especially noticed the advantage of uniting in the armature of the limbs, or in the connecting arc, different metallic substances. "There is an additional peculiarity," he says, "which deserves attention, and which I have very often observed in regard to the connecting arcs, namely, that they are vastly more efficient when composed of different metallic substances than when consisting of one and the same metal." But he does not undertake to explain this peculiarity, although he found that, of various metallic combinations, some were more effective than others.

He was perfectly clear as to the prime importance of what he had actually discovered, and the secondary value of what was only inferential, and this distinction is expressly stated in his opening chapter. "From all these particulars," he says, "investigated and established by a long series of experiments, we have not only shown that these contractions are due to electricity, but have furthermore been able to indicate certain conditions and laws by which they are regulated. . . . . We have also appended to the narrative a number of corollaries, together with some additional conjectures and hypotheses, mainly in the hope of opening a way for further experiments, by which we may at least be enabled to approximate the truth, even if we cannot expect to reach it altogether."

There are some curious surmises in Galvani's book as to the possible future value of his discoveries in the treatment and cure of nervous disease. He recognizes the difficulty of their application to pathology, on his own hypothesis of an animal electricity as the cause of muscular contraction. But they are interesting in connection with the imperfect state of pathological knowledge in his day as compared with the present, and some of his remarks sound almost prophetic. "In regard," he says, "to the cure of paralysis, I see that it is a matter of great uncertainty; for it is not easy to say whether the disease be caused by a degeneration of structure in the nerves and brain, or whether it be due to an obstruction of the supposed electrical circuits by the deposit of some non-conducting material." "But perhaps," he adds, "the whole thing will some day or other be cleared up by further practice and experience."

Galvani did not have to wait long to see a very important advance made in the path which he had opened. One of his contemporaries was Volta, who had already been for fifteen years Professor of Physics in the University of Pavia, and who was admirably fitted, both by his capacity and his attainments, for treating a new subject with success. Volta was greatly attracted by the novelty and character of Galvani's experiments. He repeated them, with many extensions and variations; and he not only verified their results, but was enabled to throw a new light on the immediate cause of their phenomena. His first investigations were communicated in the form of two letters to the Royal Society of London in 1793, under the title, "An Account of Some Discoveries made by M. Galvani, with Experiments and Observations on Them."[3] In this communication he refers to Galvani's treatise, published two years before, as containing "one of the most splendid and striking discoveries, as well as the germ of others in addition."

Volta naturally approached the subject rather from its physical than its physiological side, and he had a certain mathematical habit of mind that led him to appreciate the value of quantities in such an investigation. He began by determining, in an approximate way, the amount of electrical stimulus capable of producing convulsions in the muscles of the frog. By using successively smaller and smaller charges from a Leyden jar, he found that the entire and living frog might be convulsed by electric discharges which would give but very faint sparks, and which would affect only the most delicate of the electrometers then in use. But a recently killed frog, prepared after the method of Galvani, was more sensitive still. In this condition it could be made to contract by an electric discharge fifty or sixty times more feeble, and quite imperceptible with any electrometer, unless by aid of the condenser. In this way he exhibited Galvani's frog as a new kind of electrometer or electroscope of extraordinary sensibility; and he named it accordingly the "animal electrometer." This showed conclusively that in all the experiments with induced electricity, the dissected frog might be convulsed by an electric discharge too feeble to be detected by other means.

Volta then began to investigate the source of electricity in Galvani's third set of experiments, namely, those with the dissected frog and the metallic arc. Galvani, it will be remembered, attributed this elec-

[3] Philosophical Transactions of the Royal Society of London for the Year 1793, page 10.

tricity to the different condition of the animal tissues, and always made his connection between the nerve on the one hand and the muscle on the other, as he would between the two surfaces of a Leyden jar. With the connection made in this way the effect is really more striking, because the whole of the galvanic current passes through the isolated nerve, and thus produces a corresponding excitement. But Volta found that the two separate elements, of nerve and muscle respectively, were not essential to the result. If one metallic armature were placed on the muscle and another also on the muscle near by, or if they were placed on corresponding muscular parts of the two legs, a contraction ensued on connecting them by the metallic arc. The same thing happened with the nerve. If an armature of silver were placed on one part of the crural nerve above its junction with the muscles, and one of tinfoil at another part of the same nerve still higher up, and connection made between them, the leg was convulsed, notwithstanding that the whole of the muscles, as well as a portion of the nerve, were outside the electric circuit. This did not correspond with the idea of an animal electric apparatus consisting of the nerve and muscle combined. It was necessary to look elsewhere for the source of the electricity under these conditions, and Volta found it in the contact of dissimilar metals. This contact developed but a minute quantity of electricity, too small to be recognized by any other means at the command of the experimenter; but the dissected frog was an electroscope of such sensibility that it responded to the test and betrayed the electric discharge by a convulsion.

Volta was in very much the same position for this part of the discovery as Galvani had been in regard to his own earlier observations. He was compelled to recognize its reality and importance, without being able to give its explanation. "I confess," he says, "it is not easy to understand how or why the application of dissimilar armatures, that is, of different metals, to two similar parts of the animal, or even to neighboring parts of the same muscle, should disturb the equilibrium of the electric fluid, and drive it from its condition of repose into one of active and continued displacement. But whatever may be the cause of the phenomenon, and whether intelligible or not, it is nevertheless a fact, abundantly established by the experiments already detailed, and further corroborated by those which follow."

For several years Volta continued the study of this subject, and at last found a way of greatly increasing the intensity of the phenomena. This was by multiplying the number of pairs of his dissimilar metals, so as to form the Voltaic pile. His results were given, in 1800, in a letter to the Royal Society,[4] containing a description of his new contrivance. Each member of the pile consisted of a plate of zinc in contact with a plate of silver. This was covered by a layer of moistened paper or membrane. Then followed a second pair of zinc and silver plates, and so on alternately; the two metals always recurring in the same order, and each pair being separated from those above and below by moist membranes. With this arrangement the intensity of the action, on connecting the extremities of the pile, was sufficient to cause shocks and muscular contractions in the hands and arms, and to affect the senses of sight, hearing, taste, and touch. Its operation was compared to that of the torpedo and electrical eel, and it received the name of the "artificial electrical organ."

The peculiarity of this discovery was that it introduced into electrical science two new features. Before that time electricity had been obtained only by the combined use of different substances, one of which must be a conductor, the other a non-conductor, as in the frictional machine, the Leyden jar, and the electrophorus; and when an electrified body was touched by a conductor the whole of its charge was expended, and it could be electrified again only by receiving a new charge from an extraneous source. But in the electric pile Volta found, to his surprise, a source of electricity in substances all of which were conductors; and furthermore, a source which seemed inexhaustible, because, however often the two ends of the pile were touched, the same shock was repeated with the same intensity. The inherent force of the pile seemed to urge the electric fluid incessantly forward, returning upon itself in a continuous flow, so long as the circuit of conductors remained complete.

Volta attributed this action entirely to the contact of dissimilar metals. This view is plainly expressed in the title of his letter to the Royal Society, and is repeatedly insisted on in the course of the communication. The fluids or moistened membranes interposed between the metallic pairs he regarded only as conductors; and when a saline solution was found to be more efficient than water alone, he thought it was because the salt increased the conducting power of the water. In reality, the source of power in the voltaic pile is the chemical action between the fluid and the metals, one of which is more oxidizable than the other; and for every unit of electric force sent through the circuit, a definite quantity of material undergoes chemical transformation. The contact of dissimilar metals is not essential to the result, for a current may be produced without it, if we use two different liquids, of which one is more decomposable than the other.[5]

Neither the first nor the second explanation of the phenomena observed was therefore entirely right, as we understand it. Volta imagined the metals in his pile to act by contact alone, while they are really consumed by oxidation. In Galvani's experiment, the connecting arc, where the two metals join, is, as Galvani supposed, a conductor and nothing more; but its different extremities, when applied to the animal tissues, form with them a galvanic battery of a single cell, and thus produce the current which excites their contraction. We now use it, for physiological purposes, in a different way. We place the two metallic plates in a cup of acidulated fluid, and make the returning current pass through the muscles and nerve. But the effect is the same, for the active force of the current is equal in both directions.

The results obtained by these two investigators were distinct from each other, but of almost equal importance. Galvani discovered the electric action on nerves and muscles which bears his name. Volta gave to physical science a new apparatus, by which current electricity is transmitted, in a continuous circuit. Each investigator was partially at fault in the theoretical explanation of his own discovery. But the value of the discovery has remained, and has even largely increased in the course of a century, notwithstanding the difference in its interpretation. It also appears, from the history of the circum-

[4] Philosophical Transactions of the Royal Society of London for the year 1800, page 403.

[5] Daniell: Introduction to the Study of Chemical Philosophy, page 492. London, 1843.

stances, that the second of these discoveries was a consequence of the first; and nothing can show more clearly the unbroken connection of events, in the progress of science, which may sometimes extend to the most unexpected ramifications. It is plain that we should not be to-day in possession of the electric light, were it not for Volta's discovery of current electricity; and Volta produced his electric pile in trying to investigate the contraction of Galvani's frogs.

During the early part of the present century experimenters were busily occupied with galvanic electricity. They studied its action in a great variety of ways, and thus became acquainted with its mode of operation, and able to appreciate its phenomena. They found that when it was transmitted through any portion of a muscular nerve it produced contraction at the instant of closing the circuit; that afterward, while flowing through the nerve in a uniform current, it was without effect; and that contraction again occurred when the current was discontinued. Even during the passage of the current, any sudden variation in its intensity, either of increase or diminution, would produce the same effect. It was the change in the electrical state of the parts, rather than their actual condition, which operated as a stimulus, and provoked the contractions. The direction of the current, the length of nerve included within the circuit, and the frequency of making and breaking the connection, all had a certain influence in the result. Experimenters found themselves provided with a new agent, by which they could investigate nervous action at their leisure, in animals deprived of life, with the nerves and muscles exposed to view, and with far more delicacy and certainty than ever before; and the familiarity thus acquired with the operation of the galvanic stimulus prepared them for its more effective use in future investigations.

The next event of sufficient consequence to form an epoch in the history of nervous physiology was the discovery, in 1822, of the distinction of motor and sensitive properties in the two roots of the spinal nerves. Eleven years before, Sir Charles Bell[6] had made some experiments on the spinal nerve roots of a recently killed rabbit, in which it appeared that mechanical irritation of the anterior roots caused convulsion in the corresponding muscles, while a similar irritation of the posterior roots had no such effect. This, however, was not supposed to show an anatomical separation between the two powers of motion and sensibility, but between those of volition and consciousness on the one hand, and involuntary nervous action on the other. The ideas of the author on this subject were not accepted by his colleagues. In fact, they were not really published, but only printed in pamphlet form for private distribution. They hardly attracted the notice of the profession, and had no influence on the medical doctrines of the day.

Subsequently, in 1821, Bell published[7] the remarkable observation that if the seventh cranial nerve, distributed to the face, were divided in a living animal, the movements of facial expression were abolished, while the faculty of sensation could be destroyed by cutting the corresponding branches of the fifth pair. Thus, the two main properties of nervous endowment, generally associated with each other, occupied in this instance distinct situations, since the seventh was shown to be a nerve of motion only, the sensibility of the face being supplied from another source. This fact was connected, in the researches of Sir Charles Bell, with theoretical considerations of a different bearing; but it had evidently great importance of its own, and was received on all sides with much interest. It especially attracted the attention of Magendie, then at the height of his activity in physiological investigation. Magendie repeated Bell's experiments on the seventh cranial nerve, and verified their results as to its exclusively motor properties. But he was also intent on exploring various other parts of the nervous system, and in 1822 he performed and published his experiments on the spinal nerve roots.[8] His description is a model of directness and simplicity, free from any unwarranted inference or assumption. "I had long been wishing," he says, "to try the experiment of dividing the posterior roots of the spinal nerves, but had never succeeded in doing so, owing to the difficulty of opening the vertebral canal without wounding the spinal cord and inflicting severe or fatal injury upon the animal. But a month ago I received at the laboratory a litter of pups only six weeks old, and it seemed a good opportunity for another attempt at the operation. This time, in fact, I succeeded, by the aid of a very sharp scalpel, in laying bare almost at a single stroke the posterior half of the spinal cord with its membranes. I then had no difficulty, after opening the dura mater, in bringing into view the posterior roots of the lumbar and sacral nerves; and by lifting these roots on the blades of a pair of fine scissors, I was able to divide them on one side without injury to the spinal cord. Not knowing what would be the effect of this operation, I closed the wound by a suture in the integument and kept watch of the animal. At first it looked as if the limb on that side were entirely paralyzed. It was insensible to punctures and to pressure, and also appeared motionless; but soon afterward I was surprised by seeing it move very distinctly, although it was completely and permanently insensible. After trying a second and a third experiment with exactly the same result, I began to think it probable that the posterior roots of the spinal nerves might have a function distinct from that of the anterior roots, and more especially devoted to sensibility.

"I next thought of dividing the anterior roots, leaving the posterior roots entire; but that was a thing more easily said than done. There appeared to be no way of getting at the anterior surface of the cords without involving the posterior roots, and at first it seemed a hopeless undertaking. After considering the matter for a day or two, I tried to reach the anterior roots with a sort of narrow-bladed cataract-knife, by passing it in front of the posterior roots, and then turning its cutting edge forward against the bodies of the vertebræ. This plan failed, owing to the impossibility of avoiding hemorrhage from the large veins in the vertebral canal; but, while making the attempt, I found that, by drawing aside the dura mater, I could catch a glimpse of the anterior roots just where they are about to pass through the investing sheath. This was enough, and in a few seconds I had divided as many of them as I wished, on one side only. It may be imagined with what curiosity I awaited the result. It finally came in a perfectly unequivocal form, for the limb, though re-

[6] Idea of a New Anatomy of the Brain: Submitted for the Observation of his Friends. By Charles Bell, F.R.S.E.

[7] Philosophical Transactions of the Royal Society, page 398. London, 1821.

[8] Journal de Physiologie Expérimentale et Pathologique, tome ii., p 276. Paris, 1822.

taining its sensibility, was completely relaxed and motionless. Finally, not to leave anything undone, I divided both the anterior and posterior roots, causing entire loss of sensibility and motion."

Magendie began his experiments, therefore, by dividing the nerve-roots, and thus abolishing their functions. In pursuing the subject, he tried the effect of their irritation, employing for this purpose both mechanical agents and the stimulus of galvanism. The result of these experiments corresponded in general with those obtained by the method of division; that is, galvanization of the anterior roots caused muscular contraction, and that of the posterior roots sensation. There were also certain other phenomena which did not altogether coincide with the doctrine of a complete separation between the two functions, and which were not fully understood until some years later. But Magendie took cognizance of every experimental fact, whether he understood it or not; and his own subsequent researches on "recurrent sensibility" explained many of the irregularities which he at first encountered.

The distinction of properties between the spinal nerve roots was of greater importance, because it indicated a general plan of arrangement for the nervous system throughout the body. It immediately became a matter of criticism and verification for the leading physiologists of Europe, and the result was a complete acceptance of Magendie's discovery. In Germany, Johann Müller, then Professor of Anatomy and Physiology in the University of Bonn, endeavored to avoid the difficulties of so serious an operation on warm-blooded animals by experimenting on frogs. He examined the spinal nerve roots in these animals, both by the method of section, by mechanical irritation, and by galvanism [9]

"These experiments," he says, "have been rewarded with the most brilliant success. They are so easy of application, so sure, and so decisive, that any investigator may now readily satisfy himself of one of the most important truths in physiology. The phenomena are so regular and satisfactory that, for simplicity and certainty of results, they fully compare with any crucial experiment in the physical sciences. Galvanization of the separated anterior roots at once causes active convulsions; that of the posterior roots never gives rise to any sign of spasmodic action."

In this way the distinct endowment of the two kinds of nerve-fibres was experimentally established. Once placed on this footing, the pursuit of nervous physiology was greatly increased in efficiency and extent. By applying the galvanic stimulus to a spinal nerve, above or below the point of section, its mode of action was determined by the excitability of its motor or sensitive fibres. The same method was employed for the cranial nerves, both externally and at their roots, and every branch of inosculation was scrutinized by the same means. It is hardly possible to overestimate the change thus introduced into the study of the nervous system and the increased facilities which it supplied for further investigation.

We now come to Marshall Hall's discovery of the reflex action of the spinal cord. Up to this time the motor and sensitive properties of the nervous system had been understood by physiologists as almost wholly subservient to voluntary motion and conscious sensibility. These functions resided in the brain, as the organ of intelligence and the source of all spontaneous action. From it the motor nerves transmitted to the muscles the commands of the will, while the sensitive nerves brought to it from without the impressions made on the integument. The spinal cord was part of this apparatus of transmission. Like the spinal nerve-roots, under the influence of galvanism, its posterior columns were found to be sensitive and its anterior columns excitable; and its complete division at any one point abolished voluntary movement and sensation in the parts below. It was the channel through which the spinal nerves held their connection with the brain.

But Hall observed that, notwithstanding the loss of sensation and volition after removal of the brain, the animal might still be capable of motion in the limbs, provided the spinal cord remained. Although phenomena of this kind had already been noticed in several instances, they had not been demonstrated with sufficient distinctness to fix the attention of physiologists. Hall's observations were first announced in a communication to the London Zoological Society in 1832. They were further embodied in his "Lectures on the Nervous System and its Diseases" in 1836, and still more formally presented in his "Memoirs on the Nervous System" in 1837. Their simplest demonstration was given by him in the following way: in a living and uninjured frog the signs of sensation and volition are manifested whenever the skin is irritated at any point, since the animal feels the impression and responds to it by a voluntary motion. When the head is cut off, or the spinal cord is divided at its upper part, the limbs are paralyzed and sensation is abolished. But if, while the animal is in this condition, one of the feet be pinched, the limb is drawn upward; and the movement may be repeated as often as the irritation is applied. Such a movement is very different from that caused by galvanizing a motor nerve, since the stimulus in this instance is applied to the skin, and the muscles react in consequence. Both skin and muscles must retain their connection with the spinal cord, since if this connection be cut off, no movement takes place on pinching the foot. Finally, the nerves remaining uninjured, if the spinal cord be broken up, all reaction ceases, and irritation of the skin has no further effect. But does not such a violence destroy the physiological property of the muscles, and in that way prevent their contraction? This doubt is removed by applying a galvanic current to the muscles themselves, when they are at once convulsed, showing that their contractile power is unimpaired.[10]

Thus, it is the spinal cord which acts, independently of the brain, as a medium of communication between the integument and the muscles. The stimulus conveyed inward, through the sensitive nerves to the cord, is thence reflected outward through the motor nerves to the muscles. From this circumstance it received its name of "reflex action;" and since it was first studied and demonstrated in the spinal cord, it was generally known as the "reflex action of the spinal cord."

But the same form of activity was afterward found to be very widely extended in the nervous system. The medulla oblongata has its own centres of reflex action, either directly or indirectly essential to the continuance of life. Wherever there is a ganglionic mass of nervous matter, with motor and sensitive fibres originating from it, there is a similar focus of nervous power, often quite disconnected with consciousness and volition. In a state of absolute in-

[9] Handbuch der Physiologie des Menschen, Band I., p. 651. Coblentz, 1837.

[10] Lectures on the Nervous System and its Diseases, page 19. London, 1836

sensibility, in man or animals, a touch upon the cornea will cause closure of the eyelids, irritation of the anus will increase the contraction of the sphincter, and the contact of a solid body with the fauces will excite the movement of deglutition; and in all these instances the reaction disappears when its special nervous centre is destroyed. Similar facts were soon observed in man in cases of paralysis, as where movements are produced in paraplegic limbs without the knowledge of the patient; and nearly all the phenomena of convulsive affections were seen to have their origin in some unusual irritation of a nervous centre, or in the morbid exaggeration of its excitability. From that time forward the reflex action of the nervous system entered more or less into the whole study of its normal and diseased conditions.

The next topic of special interest in this connection is the influence of the nervous system on the organs of circulation. The earlier approach to definite knowledge on this subject was a very slow one. It consisted mainly in establishing the fact of contractility in the arteries, and was accomplished by experimental inquiries extending over a long time—from those of Hunter, on the arteries of animals, in 1793, to those of Kölliker,[11] in 1849, on the constriction caused by galvanism in the popliteal and tibial arteries of an amputated human limb. A new epoch in the physiology of the circulation was reached in 1851, when Claude Bernard [12] published the discovery that division of the sympathetic nerve in the neck is followed by enlargement of the blood-vessels on the corresponding side of the head. This effect was so striking and so constant, that when once announced there was no difficulty in its verification and no doubt as to its reality. Almost immediately after the section of the nerve, an increased vascularity becomes visible in the conjunctiva, the mucous membrane of the nostril, lip, tongue, and cheek, and in all parts of the skin on the affected side. It is most distinctly seen in the ear of the white rabbit, because the organ presents a thin expansion of semi-transparent tissue, convenient for observation, and because the two ears placed side by side afford a ready criterion of any change in vascularity. (In the first report of these experiments, the attention of the observer was principally directed to the local increase of temperature which also follows division of the sympathetic; but this was afterward seen to depend on the greater activity of the circulation, which was then recognized as the primary and characteristic result of the operation.)

This fact, of enlargement of the blood-vessels from division of the sympathetic nerve, at once excited a lively interest among physiologists. Hardly a year had elapsed when a second observation, equally important with the first, was made almost simultaneously by Brown-Séquard in Philadelphia,[13] Bernard in Paris,[14] and Waller in London,[15] namely, that the condition of the circulation on that side of the head where the sympathetic has been divided may be regulated at will by experimental means. Suppose that increased vascularity has been produced by division of the sympathetic in the neck: if the stimulus of galvanism be now applied to the divided nerve, above its point of section, all the previous results of the operation disappear. The blood-vessels contract, the volume of the circulation diminishes, the local temperature is reduced, and the parts resume their normal color, or even become more pallid than before. When the galvanization is suspended, the former conditions return, with all the accompanying phenomena of vascularity, temperature and redness, and the circulation in the part may be in this way alternately increased and diminished for many successive repetitions of the experiment.

It thus appears that the muscular coat of the arteries, supplied with nerve-fibres from the sympathetic, is influenced by them in nearly the same way as the voluntary muscles are controlled by the cerebro-spinal nerves. Division of the sympathetic paralyzes the involuntary muscular fibres, relaxes the arterial walls, and allows a larger quantity of blood to pass through the vessels of the part. Galvanization of the nerve, on the other hand, stimulates the muscular fibres to contraction, narrows the calibre of the vessels, and so reduces the volume of the circulating blood. The knowledge of these facts introduced into the nomenclature of the nervous system a new title. There were evidently nerve-fibres which acted upon the blood-vessels to call into operation their contractile power; and the nerves possessing such a function, then known for the first time, naturally received the name of the "vaso-motor nerves."

But, in following out this subject, another observation was soon met with of very unexpected character, namely, that certain nerves, on being stimulated, instead of producing contraction of the blood-vessels, caused their relaxation and thus increased the activity of the circulation. This was first shown by Bernard in the case of the submaxillary gland. This organ is supplied with sympathetic fibres from the superior cervical ganglion and the carotid plexus, and with cerebro-spinal fibres from the lingual nerve and the chorda tympani. Galvanization of its sympathetic filaments produces, as in other similar instances, contraction of the blood-vessels and a diminished blood-supply. But if the stimulus be applied to the lingual nerve above the situation of the gland, or to the chorda tympani which unites with it, the result is exactly the contrary. The blood-vessels enlarge and the circulation is more activé so long as the galvanization continues, and this effect is equally marked if the nerve be divided and galvanized between its point of section and the gland.

A similar influence was found to reside in other parts of the nervous system and the nerves possessing the power of thus causing vascular enlargement were called "dilator nerves." No sooner was this fact established in a general way, than it served to explain a singular phenomenon which had been noticed many years before, but which had thus far been regarded as exceptional—namely, the influence of the pneumogastric nerve on the action of the heart. As a general rule, if the nerve going to a muscular organ be divided, the muscle is paralyzed, and if the nerve be stimulated, there is a muscular contraction. As the heart receives filaments from the pneumogastric nerve, we should naturally expect that its action would be diminished by section of this nerve, and increased by its stimulation. But the effect is really the reverse. If the poles of a galvanic apparatus be applied to the pneumogastric nerve in the neck, the cardiac pulsations are reduced in frequency, and when the strength of the current

[11] Zeitschrift für Wissenschaftliche Zoologie, Band I., p. 2 9. Leipzig, 1849.

[12] Comptes Rendus de la Société de Biologie, tome iii., p. 163. Paris, année 1851.

[13] Philadelphia Medical Examiner, vol. viii., p. 489. 1852.

[14] Comptes Rendus de la Société de Biologie, tome iv., p. 168. Paris, 1852.

[15] Comptes Rendus de l'Académie des Sciences, tome xxxvi., p. 378. Paris, 1853.

is increased to a certain degree, they stop altogether. The heart lies quiescent, in a state of relaxation, its movements remaining in abeyance while the galvanization is going on, and when it is suspended they recommence with undiminished energy. The influence exerted in this case is not reflex, but direct in its operation; for, if the nerve be divided and galvanized above its point of section, there is no result; but if the stimulus be applied below the section, its retarding action on the heart is at once manifest. Furthermore, the power of this nerve to restrain the cardiac movements, like the motor influence of a spinal nerve, is limited in duration. You cannot permanently arrest the heart, and so kill the animal, by continued galvanization of the pneumogastric. When the galvanization of the nerve has been kept up for a certain time, the heart begins to beat again. Its pulsations recur at first slowly, afterward more frequently, and at last they are restored in full regularity, notwithstanding the continuance of the galvanic current. The nerve has lost its power by exhaustion, and cannot again manifest its controlling force unless allowed to recover by repose. But the heart is still sensitive to the same influence, and if the electrodes be shifted to the pneumogastric of the opposite side, it stops as quickly as before.

It must be admitted, therefore, that the influence of the pneumogastric, whatever it may be, which controls the heart's movement, is transmitted from within outward to the peripheral extremities of the nerve, and that it acts in a positive manner, though producing a negative result. It is the most striking illustration of a kind of action in the nervous system unlike any of those formerly known, but not the less real for being difficult to understand. This is the so-called "action of arrest," an influence which passes through a nerve from its origin to a muscle, and by which the muscular contraction is suspended. As often happens in such cases, when the existence of this mode of action was once realized, it appeared that there were other instances of the same thing which had been overlooked. All the sphincter muscles, though habitually in a state of involuntary contraction, are suddenly relaxed at certain periods by an influence coming from within. The blood-vessels generally receive both kinds of nervous impression, and by the varying preponderance of one or the other they are alternately made to contract or dilate, with all the accompanying changes of local circulation. In this way it became possible to explain the mechanism of temporary physiological congestions, as in secreting glands, or in the alimentary canal during digestion; and those of longer continuance with increased nutrition, like the growth of the uterus and mammary glands during pregnancy, as well as morbid disturbances of the circulation in disease.

Quite a different line of investigation was inaugurated by Helmholtz, in 1851, for determining the rapidity with which nervous action is transmitted through the motor nerves.[16] The idea of measuring, with any approach to numerical precision, the movement of the intangible nerve-force through its fibres, would seem at first almost beyond the scope of reality, and yet it was accomplished with satisfactory success, and by perfectly genuine experimental methods. It would have been impossible, were it not for improvements in the galvanic apparatus and the registering machines, which have played so important a part in the more recent investigation of animal physics. The knowledge and use of induced electric currents we owe to Faraday, and their discovery in 1831, with all the related phenomena of electro-magnetism, magneto-electricity, and the production of instantaneous and rapidly alternating opposite currents, practically revolutionized the use of electricity for medical purposes. It also supplied especial facilities for experiments on the rate of transmission of the nerve-force.

The conditions necessary for such an experiment were two-fold. First, an instantaneous induced current, for causing a single muscular spasm; and secondly, an automatic registering apparatus, which should mark the exact time, both of the electric stimulus and of the muscular action. By this means a definite result was obtained. With the electrodes applied to the muscles of a frog's leg, an interval, amounting to the one-hundredth part of a second, appeared between the closure of the circuit and the contraction of the muscle. The muscular contraction, therefore, was not an instantaneous effect, but required a certain time to get under way after the application of the stimulus. This interval was not perceptibly altered on applying the electrodes to the nerve at or near its entrance into the muscle. But if they were applied higher up on the nervous trunk, the delay became longer; and it was increased, in subsequent trials, exactly in proportion to the distance between the muscle and the point of nerve-stimulation. It represented, accordingly, the time required for the nerve-force to traverse a given length of nerve-fibre, and, by repeating the test under various conditions, its rate of movement was fairly determined.

These experiments, first performed on the nerves and muscles of the separated frog's leg, were afterward extended to those of the living man, the electric stimulus being applied to the skin over the situation of a nerve at different points, and the contraction indicated by the swelling of the parts over the muscle. In all the investigations thus far, the nerve was excited by the artificial stimulus of electricity. Subsequently, Burckhardt[17] simplified the experiment and increased the value of its results, by employing, instead of electricity, the natural stimulus of volition. The subject being placed in connection with a proper registering apparatus, the signal for voluntary effort was given by the sound of a bell, and the movement was performed in different instances by different muscles. Under these conditions, the time necessary, both for volition and for the mechanism of muscular contraction, would be the same in all cases; but that required for traversing the motor nerve would vary according to the muscle employed. A voluntary impulse, starting from the brain, would arrive at the deltoid muscle after travelling a certain distance, but it would follow a longer route to reach the adductor of the thumb. The distribution of the crural nerve to the quadriceps extensor muscle is comparatively remote from its origin, and that of the sciatic nerve to the dorsal muscles of the foot more distant still. The difference in the time of muscular contraction observed in these cases corresponded with the different lengths of nerve conveying the stimulus, and it gave for the passage of the voluntary impulse in man through the motor nerves an average rate of twenty-seven metres per second.

A similar contrivance for measuring the transmission of tactile impressions through the sensitive

[16] Comptes Rendus de l'Académie des Sciences, tome xxviii., p. 262, Paris, 1851.

[17] Die physiologische Diagnostik der Nervenkrankheiten, p. 22. Leipzig, 1875.

nerves gave their rate of movement as forty-seven metres per second, showing a greater rapidity of transmission for sensitive impressions than for motor impulses; and by comparing the result of further experiments with the known quantities obtained in this way, a close estimate was reached of the time needed for the operation of the different senses, and even for the cerebral acts of perception and will.

When these observations were made on different persons, there was always a certain amount of variation in the result, the nervous action being in some cases more rapid, in others comparatively slow. This brought within the range of definite physiological experiment a fact first noticed in astronomical observatories, namely, that two observers, both watching for the same event, seldom see and record it at the same time. There is a difference in the quickness with which they receive its impression on the senses, and in each case there is a certain amount of delay, so that in neither the one nor the other is the phenomenon perceived at the time of its actual occurrence. In astronomical operations where extreme accuracy is required, as in transit observations for the determination of longitude, this personal imperfection of the observer needs to be corrected from a previous examination of his habitual error. In the report of the United States Geographical Surveys for 1877, it is stated by Dr. Kampf that the personal error from this source varies somewhat in the same individual from day to day, so that its amount should be ascertained, and the proper correction made for each person, whenever a longitude observation is to be taken.

There is still another point of interest in connection with the modern study of the nervous system, namely, the localization of function in different regions of the brain.

The most striking part of this subject relates to the special centres for motion and sensation in the cerebral convolutions. There are few discoveries which have seemed more at variance with our former convictions than that of the existence of these centres. Both the substance and the surface of the cerebrum had often been subjected to experimental examination, both in the living and the recently killed animal, without showing any signs of muscular reaction, and it was the universal belief among physiologists that none of its parts were directly subservient to any form of motion or sensibility. So industrious and skilful an observer as Longet[18] declared in 1869 that he had "irritated by mechanical means the white substance of the hemispheres in dogs, cats, rabbits, and birds, and had stimulated it by the application of potassa, nitric acid, or the actual cautery, as well as by the passage of electric currents in various directions, without ever bringing into play the involuntary muscular contractility or convulsive movements, and similar applications to the gray substance of the convolutions were equally without effect."

These failures made it seem hopeless to anticipate any further result from direct exploration of the cerebral substance. The brain was generally regarded as so exclusively the organ of intelligence, that it could not be expected to respond to the irritation of physical agencies. In the extremely condensed and valuable work of Ecker on the convolutions of the brain, the author says in his preface that "the accurate observation of patients by their physicians, in connection with careful autopsies, is the only means by which we can ever hope to learn the physiological significance of particular cerebral convolutions."

This preface was dated March, 1869, and in 1870 Fritsch and Hitzig[19] discovered, by experiments with galvanism on the dog's brain, that there are certain parts of the cerebral convolutions where this stimulus always produces definite and unmistakable movements on the opposite side of the body. The contraction of certain groups of muscles, and consequently particular movements in the trunk or limbs, are connected with the stimulation of particular points of the brain, and when such a point is once found, the corresponding movement may be reproduced at will by repeating the application of the stimulus. There is plainly, in some way or other, a communication through definite nervous routes from the special centre of motion on the surface of the hemisphere to the motor tract in the medulla and spinal cord, and thence to the muscle which performs the contraction. In all the animals used for experiment these centres are grouped in certain regions, while other portions of the cerebral surface show no similar indications; and, by comparing their position in different species, aided by observations in human pathology, it appears that in man the motor centres for the body and limbs of the opposite side are mainly located in the anterior and posterior central convolutions immediately bordering on the fissure of Rolando.

Thus, the earlier failures and the more recent success in the discovery of the motor centres are both explained. It is true that a large part of the cerebral surface is unexcitable by artificial means. You may apply the galvanic electrodes to twenty different points of the convolutions without the least sign of a muscular contraction, but on the twenty-first trial you may strike one of these centres, and then the muscular spasm immediately follows. We are now so well acquainted with their probable location in any particular brain, that we need not lose a great deal of time in finding one of them; but, before the geography of their distribution was known, it is not surprising that experimenters should have overlooked their existence.

The account given of their discoveries by Fritsch and Hitzig was exceedingly well expressed, and bore internal evidence of its faithfulness of description. All the details of experimental procedure were fully explained, and the results were stated in such a way that other observers could easily follow in the same direction and test their reality. Some doubt has been entertained in various quarters as to the interpretation of the phenomena, and particularly how far the muscular contractions might be due to a diffusion of the galvanic current beyond the limits of its immediate locality. But this doubt was removed after repeating the experiments by a variety of methods, and the distance of the motor centres was corroborated by subsequent discoveries in the minute anatomy of the parts, and by observations on the local alteration of structure in cases of hemiplegia. The subject is still so new, and in so active a condition of development, that it can hardly be presented in the form of a complete or well defined physiological doctrine. But it is evidently a matter of great importance, and is probably receiving at this time a larger share of attention than any other single topic relating to the nervous system.

Its latest extension is connected with the centres

[18] Traité de Physiologie, tome iii., p. 146. 3me édition, Paris, 1869.

[19] Archiv. für Anatomie, Physiologie und wissenschaftliche Medicin, p. 300. Leipzig, 1870.

of *sensation* in the cerebral hemispheres. As some parts of the convoluted surface of the brain are plainly subservient to muscular action, it is natural to infer that the remaining unexcitable portions may have a similar connection with the power of sensibility; and it is asserted by some, with more or less confidence, that the senses of touch, taste, smell, sight, and hearing are separately located in as many different regions of the cerebral cortex. The experimental evidence of these localizations is far from being altogether satisfactory; but in one instance at least it is very striking, and indicates beyond doubt a close relation of visual sensibility with the "angular convolution" on the posterior and lateral part of the cerebral hemisphere. If this convolution be extirpated, the operation is followed by blindness of the opposite eye, without any other perceptible disturbance of either motion or sensibility. As other parts of the brain-surface, of equal or greater extent, may be removed without causing impairment of vision, it is difficult to avoid the conclusion that this region has a special connection with the sense of sight. The exact nature of the connection will doubtless be better understood from further investigation.

The complete history of physiological science for the last hundred years, in regard to the nervous system, can hardly be given in the space of a single lecture. But its most important advances are so connected with each other, that they have a relation very much like that of cause and effect. When a new subject of inquiry is first opened, the progress for some time is a slow one. There are difficulties in the way which must be overcome by repeated experiments, by gradual improvement in the apparatus, and by better methods of procedure. The causes of the phenomena are imperfectly understood, and their relation with other observed facts is not immediately apparent. But when the knowledge acquired has reached a certain point, its advance becomes more rapid. Every addition enlarges the circle of its operations, and enables it to execute them with greater facility. And the results attained by this means are not always those most directly anticipated. One discovery often leads to another, by bringing into view incidental facts, which, in turn, become the sources of new information, and in that way it creates opportunities for future progress which are sometimes realized in their fullest extent only after an interval of several generations.

There is no more interesting department of physiological study at the present day than that of the vaso-motor nervous system. Since it was first practically inaugurated by Bernard, thirty years ago, it has been cultivated by many observers, and has received a wide extension in many directions. It touches on most important points of pathology, as well as the functions of health. The connection between secretion and blood-supply, the mechanism of congestions, the dependence of external disturbances of the circulation on disease of internal parts, the red cheeks of pneumonia, the hectic of pulmonary phthisis, and the existence of nervous centres in the cerebro-spinal system where these changes are controlled by reflex action, are all made capable of investigation by knowledge which has been derived from this source. But how could their study have been even attempted unless we were already in possession of the simpler facts of reflex action of the spinal cord, and the different behavior of motor and sensitive nerve-fibres? All the variations in the effect produced by electric stimulus of different kinds and intensity, the comparative influence of direct and inverse currents, the exhaustion of nerves by continued stimulation, and their recovery by repose, together with many other similar conditions, were indispensable stages in the progress of discovery, and were the fruit of many intermediate investigations. But each series depended, for the possibility of its existence, on another which had gone before; and they all had their origin, in a continuous line of descent, from the experiments of 1789, in Galvani's laboratory at Bologna.

Original Communications.

SOME CASES OF GOITRE RECENTLY TREATED BY EXCISION.

By JOHN A. WYETH, M.D.,

SURGEON TO MOUNT SINAI HOSPITAL, NEW YORK.

Case I.*—Esther Schwarz, aged twenty-two, Austrian by nativity, admitted to Mount Sinai Hospital December 27, 1881, suffering with carics of the dorsal spine, and a tumor of the left lobe and isthmus of the thyroid gland. The spinal curvature was marked, the patient anæmic, and in a generally wretched condition. Periodically she was attacked with chills, followed by exhaustive sweating. The plaster jacket was applied for the patient's disease, and, by constitutional treatment, her condition was much improved. When, in July, 1881, my colleague, Dr. A. G. Gerster, aspirated the cystic portion of the tumor, and injected the cavities with tincture of iodine (fifty per cent. solution), about three ounces of reddish fluid were removed, which, examined microscopically, was found to contain red corpuscles, leucocytes, and compound granular corpuscles. The tumor became inflamed and œdematous, which ultimately subsided, leaving it in the same condition as before. In September, 1881, I proposed to remove this goitre by excision, and, the patient having readily consented, I performed the operation on September 7th.

The tumor was first exposed on its anterior and lateral aspects, and the superior and inferior thyroid arteries were tied, and a ligature en masse was thrown around the isthmus where it joined the right lobe. The balance of the dissection was made by working between self-holding *scissor-forceps*, which I had constructed by a modification of "Heger's pincettes." The hemorrhage was astonishingly insignificant. The carotid and jugular were exposed, and the tumor cut from the trachea. The wound was washed out with five per cent. carbolic, sewed up, and a drainage-tube buried in it, which only came out on the lower angle. In all, about twelve ligatures were affixed. The patient recovered without an untoward symptom, the wound healed in ten days, excepting where the drainage-tube came out, and the patient was discharged, cured, two months later.

Some slight dyspepsia and aphonia followed the operation, but these symptoms, which were due to the extent of the dissection, disappeared at the end of a few weeks.

The following cases have been reported within the last year. The operations were performed in Europe:

* I am indebted to Dr. R. M. Cramer, of the house staff, for this history.—W.

Case II.—Operator, Baumgartner, Baden-Baden. R. B——, female, aged twenty-two. Tumor extended from right ear to manubrium, and on the left side to as high as the thyroid cartilage. Duration, six years. Had been treated by frequent local applications of iodine. Marked dyspnœa, especially at night. Operation lasted four hours. About fifty ligatures applied (silk, boiled in carbolic acid). Healed per primam int., excepting lower angle, where drainage-tube was inserted; bits of silk discharged here for three months. No fever after fourteenth day. Tumor weighed 394 grammes, and was adenocystoma.—*Centralblatt für Chirurgie*, No. 43, pp. 680 et seq., 1881.

Case III.—Operator, Baumgartner. S——, female, aged thirty-two. Tumor on right side. Duration, nine years. Had been treated by iodine injections. Operation, two hours. No fever after six days. Union by granulation. Healed in nine weeks. Weight, 135 grammes. Follicular hyperplasia of right lobe.—*Ibid.*

Case IV.—Baumgartner. J. M——, aged thirty, male. Duration, six years. Dyspnœa severe. Tumor extended behind manubrium. Vessels enlarged. Operation, one and one-half hour. Nine ligatures. Cicatrization complete on twentieth day. Weight, 160 grammes. Follicular hyperplasia.—*Ibid.*

Case V.—Baumgartner. B——, female, aged twenty-two. Duration, six years. Iodine locally. Operation, one and three-fourths hour. Ten ligatures. Tumor weighed 210 grammes. Cicatrization complete on twenty-first day.—*Ibid.*

Case VI.—Baumgartner. Female, aged forty-four. Duration, since childhood. Operation, three-fourths of an hour. Seven ligatures. Healed per primam. From seventh day high fever, swelling of neck, and pain. Nineteenth day abscess opened. Cicatrization on the twenty-eighth day. Weight, 475 grammes.—*Ibid.*

Case VII.—Female, aged forty-five. Tumor very large. Severe dyspnœa. Operation, one and three-fourths hour. Nine carbolized silk ligatures. Healed by fifth week. Weight, 701 grammes.—*Ibid.*

Case VIII.—Baumgartner. C. F——, male, aged thirteen. Duration of tumor, two years; right side, and movable. Had been operated once, which was followed by marked dyspnœa. Operation, three-fourths of an hour. Three ligatures. Weight, 80 grammes.—*Ibid.*

Case IX.—Baumgartner. Miss M——, aged fifty-six. Duration, twelve years. Severe dyspnœa. Tumor extended beneath sternum. Operation, one and one-fourth hour. Nine ligatures. Weight, 280 grammes. Both lobes remained.

Case X.—V. Mosetig-Moorhof. Female, aged twenty-four. Tumor on left side only. Marked dyspnœa. Punctured, with escape of colloid material; washed out with carbolic. Followed by sharp fever, which subsided, leaving the tumor in same condition as before Operation not bloody. Secondary venous hemorrhage on seventh day. Recovery.—*Centralblatt für Chirurgie*, No. 46, p. 735, 1881.

Case XI.—Operator same. Female, aged forty-one. Tumor bilateral. Dyspnœa and difficult deglutition. Eighteen ligatures. Sudden death forty-two hours after operation. Cause of death, pulmonary and cerebral embolism. Mosetig-Moorhof thinks that thrombi from inferior thyroid vein entered the pulmonic circulation, and thence to the brain.—*Ibid.*

Case XII.—Operator, same. Patient, female, aged nineteen. Tumor bilateral. Removed in two operations, on account of shock in first operation. Little hemorrhage. Section of recurrent laryngeal necessary. Right side pneumonia followed operation. Soon after the patient had aphonia. Three months later voice returned as strong as ever.—*Ibid.*

Case XIII.—Operator, Richelot. Patient, female, aged twenty-five. Duration, fourteen years. Puncture, iodine injections, drainage, all to no purpose. Intense dyspnœa and dysphagia. Recovery with aphonia. It was surmised that both recurrent nerves had been divided. Later the voice was completely restored.—*Gazette des Hôpitaux*, No. 133, 1881.

Case XIV.—Operator, Monod. Patient, female. History not given. Recovery complete.—*Ibid.*

Case XV.—Operator, W. Whitehead. Patient, female, aged fifty-one. Duration, thirty years. Last five years had grown rapidly and caused severe dyspnœa. Tumor removed with but little loss of blood. Was located on right side. Recovered with aphonia (due to section of right recurrent laryngeal ?).—Medical Record, p. 755, December 31, 1881

Summary.—Of the fifteen cases here given, only one proved fatal, and that from an accident which is possible to every major surgical operation. So far as the experience of six surgeons may go, the rate of mortality is not very high in an operation which has met with such great disfavor, and which, to put it mildly, has been almost universally discouraged by surgical writers.

While the operation is one of danger, I think its dangers have been greatly exaggerated. I hold it an unfortunate conservatism which is content to sit quietly by and see a patient choke with a goitre, or die slowly from the annoyance, discomfort, and exhaustion which it may and often does produce.

It would be none the less unfortunate if, encouraged by these and other published cases, every doctor become convinced that he could safely excise every goitre. Alas for honesty! it is not always safe to base conclusions as to the safety or propriety of an operation on deductions from published cases. Such deductions do not usually lead to the full and true death-rate. Far from putting our burning candles under a measure, we are too apt to reserve this dark and quiet shelter for our candles which have been snuffed out.

Is Carbonate of Ammonia a Stimulant?—Dr. Rutherford's experience, as given at a meeting of the Third Congressional District Indiana Medical Society, leads him to believe that *carbonate of ammonia* does not possess a stimulant action sufficient to justify what has been claimed for it by authorities. Hence, where he once relied upon it and alcohol for stimulation in the crisis of pneumonia, he now resorts to a combination of the carbonate with tincture of nux vomica and tincture of digitalis, for the reason that nux vomica stimulates the respiratory centres, supports the absorbent powers of the stomach when they flag, and in this way serves to prevent nausea and the accumulation of fluids which otherwise occur, while the digitalis adds strength to the circulatory system. Carbonate of ammonia he uses for two reasons: first, because it possesses, in a small degree, stimulant properties; second, to be able to say, provided counsel should be called, that he is giving carbonate of ammonia.—*Medical and Surgical Reporter.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, January 28, 1882.

THE AMERICAN RED CROSS SOCIETY.

A few months since, we noticed the organization in this country of a branch of the Red Cross Society of Geneva, and stated that active measures were being taken to secure its formal recognition by this Government. Bills for such a purpose are now before both Houses of Congress, and there does not appear to be any doubt as to their speedy passage. In the early part of last year, Mrs. Clara Barton, an American lady who served on the field during the Franco-Prussian War of 1870–71, under the auspices of the Red Cross Society of Geneva, was appointed by the central commission of that body to advocate the formation of an American branch for work under that treaty. The project was duly presented to Secretary Blaine, and was heartily indorsed by the late President Garfield, but, in consequence of the national calamity which resulted in the death of the latter, no active movement in bringing the matter forward was made until within the last few days. It is now understood that President Arthur has given the measure his support, and that the present Secretary of State has added his indorsement thereto.

It is hardly necessary at this time to refer to the usefulness and broad humanitarianism of the parent society. As is well known, the Society of the Red Cross was formed in 1863 by the International Convention at Geneva, Switzerland. At first the representation was limited to Baden, Belgium, Denmark, Holland, Spain, Portugal, France, Prussia, Saxony, Wurtemburg, and Switzerland. Since that period the society has extended its auxiliaries into nearly every country in Europe, and, in fact, the United States is the only great power which as yet has not formally adopted the articles of the convention.

This parent society was originally organized for the purpose of establishing soldiers' relief societies in various countries, under a common badge, for protecting, in time of war, hospitals, ambulances, hospital stores, and supplies for the wounded, and for maintaining a strict neutrality on the part of belligerent powers toward all members of the society while in service. The treaty gave to the movement a thoroughly international character. Indeed, the purposes and designs of this organization are past the necessity for advocacy on the part of any humanitarian, and are beyond the chances of question as regards its extended utility and beneficent results. If there had been any doubts on this score, they were especially dispelled by the labors of the Red Cross Society during the Franco-Prussian War. As soon as the war was declared, the Berlin Red Cross organization, numbering nearly two thousand members, offered its services, and distributed squads all along the frontier. Every facility was offered for transportation, free communication of supplies was established, and prompt and efficient aid made available at all times. The operations were carried on with the most perfect system, and on a sufficiently extensive scale to insure a most satisfactory working of details, and a corresponding benefit to the sick and wounded.

At first it will appear strange indeed that the United States, foremost in all endeavors to minister to the needs of suffering humanity, and keenly alive to the necessities of organized effort in that direction, should not long ago have entered into this international agreement. The only probable reason for the contrary is, that the real necessities for the same in possible and frequent wars has not been apparent. But Miss Barton, with a view of adapting the purposes of the organization to the real need of the nation, has proposed that, in addition to the care of the sick and wounded on the battle-field, its benefits shall be extended toward such as suffer from pestilence, famine, or other wide-spread calamities. Concerning this point, Miss Barton, in her memorial, makes the following practical suggestions:

"It may be further a part of the work of these societies in America to afford ready succor and assistance to sufferers in time of national or wide-spread calamities, such as plagues, cholera, yellow fever, and the like, devastating fires and floods. The readiness of societies, like those of the Red Cross, to extend help at the instant of need, renders the aid far more valuable and efficient than that gathered together hastily and irresponsibly in the bewilderment and shock which always accompany such calamities. The trained nurses and attendants subject to the relief societies in such cases, would accompany the supplies sent and remain in action as long as needed. Organized in every State, the relief societies of the Red Cross would be ready with money, nurses, and supplies to go on call to the immediate relief of all who were overwhelmed by any sudden calamity. It is true that the Government is always ready in these times of public need to furnish trans-

portation, and often much more. During the late yellow fever epidemic in the South, and more recently at the time of the floods in Dakota, it ordered rations, clothing, and tents to be distributed under the direction of army officers. But in such cases one of the greatest difficulties is that there is no organized method of administering the relief which the Government or benevolent citizens are willing to bestow, or trained and acclimated nurses ready to give intelligent care to the sick; or, if there is organization, it is hastily formed in the time of need, and is therefore comparatively inefficient and wasteful. Although the people of the United States may hope to be seldom visited by the calamities of war, yet the misfortunes of other nations constantly appeal to their sympathies. And in this country the South is periodically visited by the scourge of yellow fever; the valleys of the Mississippi are subject to destructive inundations; the plains of the West are devastated by drought and insects; and cities and country are swept by consuming fires. In all such cases, to gather and dispense the profuse liberality of the people, without waste of time or material, requires the wisdom that comes of experience and permanent organization. To secure such permanent organization, the American Association of the Red Cross has been founded."

As adapted to the real and pressing necessities of this nation in times of sudden and wide-spread calamity, the plan is admirable. There does not appear to be any argument against its speedy and unqualified adoption. In fact the passage of the bill is almost a foregone conclusion.

THE IODOFORM ERA IN SURGERY.

In an address, delivered not long ago, by Professor Podrazky, before the Vienna Society of Military Surgeons, a new epoch in the treatment of surgical diseases is announced. The epoch-maker in this case is iodoform, and its introduction is held to be as great an advance as Listerism ever was.

The use of iodoform in the treatment of wounds undoubtedly deserves the careful attention of surgeons. The uses of this drug in dermatology, syphilis, and gynecology, are well known, and its value here is a thing quite apart from the recent application of it to surgery. It is hardly two years ago since Mosetig called attention to the value of iodoform in the treatment of unhealthy wounds with fungous granulations, of tuberculous and scrofulous ulcers, cold abscesses, etc. In the first part of 1881 he announced remarkable results from its use in amputations, resections, as well as in various other surgical conditions. The new treatment was adopted by Billroth in his clinic, and it soon spread to other hospitals. It has already been introduced into New York, and is employed in several hospitals here.

The method of using the iodoform dressing is quite simple. The wound used to be quite filled with the pulverized drug. At present, however, instead of this, iodoform-gauze is employed. This is covered with cotton-batting, and the whole enclosed and made air-tight with gutta-percha paper. In cases where there are fistulæ, crayons made of iodoform and gelatine (one part to two), or of iodoform and tragacanth, are inserted.

The advantages claimed for this method of treatment are: that it is absolutely aseptic; there is no formation of pus, as a rule, but only of a serous secretion, such as is found under the Lister dressing; that it is simple, cheap, and convenient; the bandages can be left on eight, fourteen, or even twenty days, without harm; it is, thinks Podrazky, the ideal antiseptic dressing for armies; that no drainage is needed; that the iodoform has an anodyne effect; that it secures, in fact, all the advantages of perfect asepsis without the inconvenience, expense, or liability to failure, which belong to Listerism proper.

One inquires, naturally, what are the evidences to substantiate such claims. These cannot be given with any completeness. In a recent article in the *Archiv für klinische Chirurgie*, Dr. Mikulicz gives the results of the treatment in the Vienna General Hospital, under Billroth. These results are very favorable. Three sets of cases are given: one in which fresh wounds from injury or operation were treated; a second, including septic, or gangrenous or diphtheritic wounds; a third, including scrofulous ulcers, caries, and necrosis of bones. (The treatment is not applicable where first intention is desired.) The total number of cases reported is thirty-two, which represents only part of those thus treated.

There have been other contributions to this subject, but the tenor of them has been to confirm the statements first made by Mosetig.

The physiological action of iodoform has been investigated by Binz and Högyes, its toxicology by Oberlander, its antiseptic powers by Mikulicz and Panerth. Iodoform, when applied to fresh tissues, is very quickly absorbed, being probably dissolved in the fat of the tissues and blood. It reappears in the urine and saliva often within from three to six hours. Iodoform is said to be in part decomposed when applied to fresh wounds. It contains 96.7 per cent. of its weight in iodine, and this is set free. In its nascent condition the iodine is powerfully antiseptic; yet iodoform is not antiseptic except when it is constantly supplied directly to a tissue. It is then very active indeed; but wounds must be kept well supplied with it. These are the conclusions drawn from Mikulicz's and Panerth's experiments.

That there is some danger connected with this mode of treatment cannot be doubted. Iodoform in large amounts (gr. xxx.–xl. per day) produces toxic

symptoms: headache, muscular twitchings, malaise, vomiting, intoxication, and delirium. Persons who have been thus poisoned generally recover in a week or two. Since its use in the Vienna Hospital, several slight cases of poisoning have appeared, and one fatal case. This last was that of a weak child with a cold abscess, in which forty grammes (3 x.) of iodoform were placed. Podrazky has, however, used fifty grammes upon a wound after operation, with no toxic symptoms. The use of iodoform-gauze lessens the amount of the drug needed, and it seems probable that, with any reasonable care, the danger of getting toxic effects will be very slight.

There are some individuals, chiefly women, who have an idiosyncrasy against iodoform. This, it is suggested, may be due in part to its disagreeable smell. The odor of the drug cannot be disguised without effecting some chemical change. Peruvian balsam is probably most efficient, but this addition is a stimulating and irritating one. The essential oils have very little effect. A mixture of equal parts of iodoform and tonca bean is perhaps as good as anything. The Germans speak slightingly of the odor as a thing of small importance, and, on the whole, not particularly displeasing to Teutonic nostrils. The American patient does not adapt himself to bad smells so easily. Nevertheless, if iodoform is at all what is claimed for it, we can easily forgive its offence to the special senses. It should be given a thorough and careful trial.

EXTRACTUM CARNIS AND URINE AS MEDICINAL AGENTS. Mr. G. F. Masterman has by several analyses shown that the ordinary Liebig's extract has very much the composition of urine, except that it contains less urea and uric acid. Beef-tea, as ordinarily made, does not contain, including alkaline salts, more than from 1.5 to 2.25 per cent. of solid matters. These solids are chiefly urea, creatine, creatinine, isoline, and decomposed hæmatin—exactly the animal constituents of urine, except that there is but a trace of urea. Dr. Richard Neale, in the *Practitioner*, comments upon the above facts, and says that the real value of beef-tea as a nutriment is still not appreciated, especially among the laity. Even some physicians are apt to class it as of almost equal value to milk. Dr. Francis Sibson has shown how detrimental beef-tea may be to persons who are suffering from Bright's disease, where the kidneys are already taxed to their utmost to throw off metamorphosed matters. The addition of the nitrogenous metabolites of the cow cannot but be dangerous. Frequently, says Dr. Neale, beef-tea is recommended by practical physicians in diarrhœa, dysentery, and during diarrhœa of typhoid fever. This he considers a very dangerous practice, and looks upon beef-tea in such cases as little better than a poison. Dr. Lauder Brunton is also quoted as raising the question whether beef-tea is not actually injurious.

After thus emphasizing the fact of the non-nutritive, but stimulating properties of beef-tea, Dr. Neale states that similar properties have long been known as pertaining to urine. In South America, urine is a common vehicle for medicine, and the urine of little boys is spoken highly of as a stimulant in malignant small-pox. Among the Chinese and Malays of Batavia, urine is very freely used. One of the worst cases of epistaxis ceased after a pint of fresh urine was drunk, although it had for thirty-six hours or more resisted every form of European medicine. This was by no means an unusual result of the use of urine, as Dr. Neale was informed by the natives. As a stimulant and general pick-up, he had frequently seen a glass of a child's or young girl's urine tossed off with great gusto and apparent benefit. In some parts of England the use of urine as a medicinal agent is not unknown. In 1852 Bauer recommended the external use of urate of ammonia in lepra, morphœa, and other obstinate skin diseases. In 1862 Dr. Hastings made a report on the value of the excreta of reptiles in the treatment of phthisis.

RECENT STUDIES IN THE PATHOLOGY OF LEPROSY. The pathology of leprosy has received considerable attention of late. Much effort has been made to prove that a minute organism is at the bottom of all the trouble. The *Maryland Medical Journal* gives a very good résumé of the history of these latter attempts.

Bacilli were first observed in leprous tissues by Hausen, in 1867. Klebs and Neisser corroborated Hausen's discovery. Neisser made some very extensive observations, and announced that in twenty-one cases examined he found organisms uniformly present. They were rod-shaped, and were from one-half to three-fourths the length of a red blood corpuscle. He cultivated them, and also inoculated dogs with tissue containing them. The disease was not communicated, but organisms were found at the site of the inoculation some months later. In France, Hillairet and Gaucher have observed the organisms and claim to have cultivated them.

Quite recently M. Cornil has been studying the matter, and has presented his results to the Academy of Medicine, of Paris. He found bacteria in the leprous tubercles of the skin and in the mucous membranes. Here they were very small, being about $\frac{1}{1\frac{1}{2}\frac{1}{0}\frac{1}{0}}$ millimetres in diameter. But he found much larger organisms in softer tissues, like the liver and the testicles. It seems that these bacteria have a most universal distribution. Besides the places enumerated, they exist in the fibrous tissues, the cornea, neurilemma, adipose tissue, and lymphatic glands. In this country, Dr. Bermann, of Baltimore, has announced the discovery, in leprous tissues, of bacteria similar to those found by other observers.

In the December number of the *Archives of Medicine* there is a clinical contribution to the subject of

leprosy, by Dr. H. D. Bruns, of New Orleans, and an article upon the pathological anatomy of the disease, by Dr. H. D. Schmidt. This latter observer gives an exhaustive account of his histological studies, in three cases; but he makes no mention of bacilli or bacteria. He describes the characteristic histological element of leprosy, as represented by certain small proliferating cells, of a round, oval uni- or bipolar or otherwise irregular form.

The origin of these cells has heretofore been generally ascribed to the connective tissues of the affected organs. Dr. Schmidt shows that they may also originate from the glandular epithelial, the endothelial, or even the fat-cells. They are generally found in groups or nests. The whole process, therefore, according to Dr. Schmidt, cannot be regarded as a mere hyperplasia of the connective tissues. Its products represent rather a neoplastic growth, resembling, in its general characteristics, the tubercle of tuberculosis, and like that undergoing ultimately a retrograde metamorphosis. The neoplastic element of leprosy remains for a long time limited to the skin, and life is not endangered until it reaches the internal organs. Dr. Schmidt found some changes in the nerve-centres, *e.g.*, in the central canal of the cord, and in the lateral columns. There was, however, nothing to indicate that these changes were primary, or that the disease, as has been alleged, is of nervous origin.

The view that it depends upon the presence of specific organisms, has at present very slender grounds for support. If leprosy were thus originated, it would probably be contagious, but it has not been inoculated in lower animals as yet; nor have the bacilla found in the tissues been cultivated with any results. The idea that so chronic and insidious a disease is dependent upon minute living germs is, on the face, improbable.

The Question of Moral Insanity.—In a reported interview, Dr. G. M. Beard discourses as follows regarding moral insanity: "In a certain sense, all insanity is moral insanity. It is impossible for anybody to be insane without being, sooner or later, affected in his moral nature. I have never seen, read nor heard of a case of any kind of insanity where the moral nature was not affected. Indeed, this is usually the very first thing that is noticed—taking the form of ill-manners. Manners are minor morals, and change of manners from gentle to severe and rude is one of the constant symptoms of most cases, and that which is first noticed by friends. The man is moody, capricious, impolite, silent, tricky, cunning, passionate, excessively hilarious, extravagant, inconstant—all this is immorality, and if the insanity continues it may develop into theft, murder, suicide. I do not myself use the term 'moral insanity' on account of its vagueness—it is liable to convey a wrong impression. For the same reason I do not use the term 'mental insanity'—all insanity is both mental and moral. The intellect is affected often when there are no delusions."

Reviews and Notices of Books.

The Science and Art of Midwifery. By William Thompson Lusk, A.M., M.D. With numerous Illustrations. New York: D. Appleton & Co. 1882.

It is now two hundred years since the labors of Mauriceau placed the ancient art of midwifery upon a scientific basis. It is a century since Baudilocque taught the mechanism of labor; explained the use of the forceps; defined the symptoms of pregnancy, and made obstetrics the most exact of the medical sciences. Since that time there have been no epochs in, or revolutionary contributions to, obstetrical science. Its progress has been rather in the minuter details of ante- and post-partum treatment, in the introduction of ecbolics and anæsthetics, and in the application of modern pathology and surgery to various conditions. In place of growing, obstetrics has given place to gynecology, and thus, in a measure, satisfied the uneasy aspirations of the scientific mind to find something new in parturient phenomena.

The result of the application of modern scientific methods to obstetrics has been to surround childbirth and all the conditions relating to it with a great many artificialities. The examination of the urine, auscultation of the abdomen, anæsthetics, ergot, dilators, forceps, Credé's method, antisepsis, supporting and stitching the perineum, are all liable to accompany the process of child-bearing in these days. This tendency has one element of danger in it. The physician may be led to trust to his scientific methods more than to his good sense. It is a sentiment as old as Confucius, that "learning without thought is perilous." It well applies to the modern scientific obstetrician.

Professor Lusk's book presents the art of midwifery with all that modern science or earlier learning has contributed to it. It has all the merits and dangers of a treatise in which science and art have got rather the better of nature in the mind of the writer.

The work naturally leans largely on German authorities. It bears the evidence of much conscientious labor and research. It is freer from references to the author's personal experiences than is usually the case, which shows a good taste too rarely seen now-a-days. It does not injure the book, since that bears plenty of indirect evidence of a wide practical experience. The style is clear, but has no other positive literary merits.

We cannot go into any complete analysis of the work. There is the usual anatomical introduction. There are two chapters on the physiology of the ovum, which are exceedingly good, and supply a deficiency that exists in many similar text-books. The author devotes a somewhat disproportionately large space to pelvic and sexual abnormalities. They are chapters, however, which show original work. Under the head of Diseases of Childbed, the author gives up most of his space to the subject of puerperal fever. He evidently has spent a great deal of time in studying the literature of its pathology. The result is an acceptance of the bacterial theory of the origin of the disease. In spite of the many authorities quoted, we cannot consider Dr. Lusk's opinion of much weight. His discussion of the question shows that he is not himself

a practical pathologist; and his unquestioned acceptance of the doctrines and discoveries of the eminent but imaginative Klebs, certainly shows an immaturity of pathological attainments. The remaining diseases of childbed are treated of very briefly.

The book is well printed and superbly illustrated. It is, on the whole, the most creditable contribution to obstetrics which America has yet made.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 19, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT. IN THE CHAIR.

DR. JOSEPH WIENER, through the Library Committee, presented a

CRAYON PORTRAIT OF WILLIAM DETMOLD, M.D.

Remarks were made by Drs. Willard Parker, Lewis A. Sayre, and the President.

The paper of the evening was then read by DR. SAMUEL W. GROSS, of Philadelphia, and entitled

THE INFLUENCE OF OPERATIONS UPON THE PROLONGATION OF LIFE AND PERMANENT RECOVERY IN CARCINOMA OF THE BREAST.

He began by saying that "the conviction is steadily gaining ground that carcinoma of the breast is curable, and that it is primarily a local affection, and not an expression of constitutional taint, dyscrasia, or diathesis."

In favor of these views were Virchow, Billroth, Fischer, Esmarch, Nussbaum, Volkmann, Kocher, Hutchinson, Gull, and others in Europe; and Parker, Gross, Peters, and others, in this country.

In connection with this subject three important questions arise:

1. Does the knife prevent local dissemination of the disease?

2. Does the knife prevent lymphatic involvement? and

3. Does the knife prevent the development of metastatic tumors?

First.—Does surgical intervention prevent invasion of adjacent tissues? This question must be answered in the affirmative in a certain proportion of cases. The conclusion of the reader was that extirpation precludes extension to the skin and surrounding parts in *ten* per cent. of all cases.

Second.—Does surgical interference with the knife prevent involvement of lymphatic glands? It certainly does.

Third.—In attempting to answer this question—Does the knife prevent the development of metastatic tumors—it must be borne in mind that such tumors are not always developed.

After analyzing several collections of cases, Dr. Gross reached the conclusion that operation prevented implication of internal organs in 32.30 out of every one hundred cases.

Again, life may be prolonged and permanent cure may be effected by surgical intervention. Extirpation adds one year to life. Special attention was directed to Volkmann's statement that the result might be regarded as final if the patient survives over *three* years after the *last* operation. The author of the paper then presented an analysis of 524 cases, in which 1 in 9.19 fulfilled these requirements. Subjecting the 524 cases to Paget's severe test—that the patient should live more than ten years from the beginning of the disease, or that the disease should be stationary—he found that 1 in 5.7 fulfilled these requirements. The average duration after operation in all these cases, was from seven to ten months. An analysis of the 57 cases cured was then given, and the conclusion reached that recurrent tumors should be freely extirpated as soon as they appear.

The absence of glandular implication does not afford absolute guaranty that secondary deposits are not in the viscera.

Dr. Gross makes it a rule to amputate the entire mamma, search for any outlying nodules, dissect away the fascia overlying the pectoral muscle, open the axilla, and remove any glands which have escaped observation previous to interference. Heretofore, one cure out of every nine and one-fifth cases has been the most expected from early radical measures; but there was reason to believe that the ratio of cure would be increased. Partial operations should be *discarded*, for they are more fatal than removal of the entire breast, and they hold out but little prospect of permanent recovery. He believed that in the future the mortality from radical procedures would not reach ten per cent.

The conclusions reached by the author of the paper were substantially as follows:

1. That surgical intervention in carcinoma of the breast tends to retard the progress of the disease by preventing local dissemination, implication of associated lymphatic glands, and the development of visceral tumors.

2. That local reproductions do not militate against permanent recovery, provided they are thoroughly and early excised, as soon as they appear; and that lymphatic involvement does not forbid operation, since, in fact, glands were removed in more than one-third of the examples of final cure.

3. That the subjects are almost without exception saved from local and general reproduction, if *three* years have elapsed after the last operation.

4. That the risk from operations is outweighed by benefits which accrue from them, since they not only add twelve months to the life of the patient, but also cure one-half as many patients as they destroy.

5. That all carcinomas of the breast—if there is no evidence of metastatic tumors, and if thorough removal is practicable—should be dealt with as early as possible, by amputating the entire mamma, integument and all, dissecting away all the subjacent fascia, opening the axilla, with the view to exploration and removal of all the glands not palpable prior to interference.

The paper being before the Academy, the President invited DR. GEORGE A. PETERS to open the discussion. He said that, thirty years ago, he was taught not to meddle with carcinoma of the breast, for it was sure to recur, and if an operation was performed, it would hasten rather than postpone a fatal termination of the case. He, however, failed to feel the force of the teaching, and determined to pursue another course, and the result of his experience had been very much in accord with the conclusions reached by Dr. Gross. He agreed thoroughly with the deductions which the author of the paper had made. He recalled three cases of permanent re-

covery. In one the patient was forty-five or fifty years old, from whom he removed a cancerous breast sixteen or seventeen years ago, and she is yet living, and has been free from the recurrence of the disease. In two other cases the patients had remained in good health, now *ten* years since the operations.

He had a case under observation, in which the patient was fifty years of age, had ceased to menstruate, and for whom he removed a cancerous breast two years ago. The entire gland, the glands in the axilla, and the fascia of the pectoral muscle, were removed. The disease recurred in the cicatrix one year afterward. The recurrent tumor was removed as soon as it was discovered. One year subsequent to the second he performed a third operation, and removed *two* nodules in the skin. The wound healed kindly and completely, and he hoped to be able to add her case to his number of permanent recoveries.

He believed it to be well to always remove the entire breast and open the axilla, if there was any reason to suspect contamination there.

With regard to the manner of performing the operation, the incision should be made carefully, but freely down to the gland, being sure that all the affected tissue is included in the mass removed; and also be careful not to bruise the neighboring tissues, lest lymphatic channels were opened and additional opportunity for the extension of the disease was thus offered.

Dr. Weir was surprised at the comparatively high rate of mortality reported by Dr. Gross after amputation of the breast—seventeen per cent.—which was very much greater than occurred generally with surgeons in New York. He had amputated the breast between sixty and seventy times, with only one death, which was due to erysipelas. Since the advent of Listerism the rate of mortality from the operation should not be high.

As to the absolute curability of the disease, he had not obtained so good results as Dr. Gross had reported, namely, one in nine cases. He believed that the greatest hope was in the direction of prolongation of life and postponing recurrence. A case as a remarkable illustration was cited. In 1856 Dr. Wood removed the right breast of a patient; Dr. Post the left breast of the same patient in 1867. A nodule of the disease recurred in the cicatrix of the right side in 1873, which was removed by Dr. Weir, examined by Dr. Delafield, and pronounced to be cancerous. The disease recurred in 1875, was removed in 1877 and 1880, and then recurred with such extensive adhesions to the sternum that further operation was inadmissible, and the patient died about one month ago.

He also cited a case in which the breast was removed in 1869, and the disease reappeared in 1881. These cases do not invalidate the rule given by Volkmann and quoted by Dr. Gross, but at the same time they made him less hopeful, and also feel that he could not, with safety, pronounce against danger.

With regard to the method of operation recommended by the author of the paper, he had had too short an experience with it to enable him to give a decided opinion concerning its real merits or demerits.

Dr. T. E. Satterthwaite, upon invitation, occupied the attention of the Academy chiefly with some statistics that he had derived from the study of carcinoma in New York. Before presenting these facts, he stated that he personally felt that the profession owed a great debt to Dr. Gross for the careful and laborious study he had given to breast-tumors, and for the vigorous effort he had made to show that a certain definite clinical picture was associated with equally definite microscopic appearances.

The attainment of this result should be of great importance to the surgeon, as he is now able to recognize the special variety of disease, and make it tally with the advanced standard of pathological terminology, while he has at the same time an additional satisfaction in being able to give a certain mathematical precision to his prognosis. Indeed, the surgeon will now rarely make a mistake, if he notes the time of life at which the disease commenced its duration, rate of growth, external appearances, feel, conditions of the nipple and of the adjacent glands. Dr. Satterthwaite observed that in his experience we had only three varieties of carcinoma to deal with in the breast—scirrhus in its various forms, colloid and encephaloid. Of the former he would not speak, because its characters were so well known that a description would be superfluous. It was well enough, however, to allude to encephaloid, because it was frequently mistaken for sarcoma. The former, occurring in about three per cent. of his cases, was surpassed in this regard by sarcoma, which occurred in four per cent. Encephaloid is a disease that belongs to a more advanced period of life than scirrhus, the age of fifty to fifty-one representing the date of its average appearance. It is apt to be a rapidly forming, often bulky tumor, which is associated with much pain, and may or may not implicate the nipple and neighboring glands. The surface of the tumor is usually soft, often semi-fluctuating, is apt to break down early and give the appearances that attend active inflammation. Its surface also is apt to be lobulated, and the growth will, if sufficiently advanced, adhere to the underlying tissues. Though this form of growth is very naturally associated in one's mind with a rapid and excessively malignant course, it was but proper to say that in two cases—the only ones of encephaloid of which he had extensive notes—one, a Bermuda lady, survived the inception of the disease five years, and the other eight and nine. The latter is now a private nurse in St. Luke's Hospital and is apparently in perfect health, having had no signs of recurrence since the first and only operation. The growth was removed four months after it was first detected.

Sarcomas are met with at an earlier period of life than encephaloid, attain a great bulk in a short time, but are thought to have a more chronic course on the whole, as they recur after considerable intervals. In them the nipples are occasionally retracted and there is implication of adjacent glands, while often the skin becomes involved, and later breaks down, allowing the new growth to protrude, forming, as in encephaloid, a "fungus hæmatodes." Such tumors are not, however, adherent to underlying parts. The surface is slightly lobulated, but smooth. On cutting open such a tumor with an ordinary knife, it will be seen to have a capsule, while encephaloid does not. The microscopic appearances are those of round- or spindle-celled sarcoma. In addition, cysts are quite common, but both in sarcoma and in encephaloid there may be discharge from the nipple.

In colloid carcinoma we have a variety that occurs in about two per cent. of all breast-neoplasms. It appears on an average at an earlier period than scirrhus, and is essentially chronic in its development. The surgeon is quite apt to mistake this variety for scirrhus, because the physical characters before operation simulate those of the former disease very

closely. After removal, however, when it has been opened by the knife, the peculiar gelatinoid material exudes or can be expressed, and then the diagnosis of colloid is easily made. Of two cases in Dr. Satterthwaite's experience, where pretty full histories have been obtained, the patients were well at last accounts—one at the end of two, and the other at the end of six years after the origin of the disease. As to its danger of being confounded with myxoma, Dr. Satterthwaite was not prepared to say anything, as he had never met with this former tumor in the breast. Colloid was the most chronic of all these varieties.

These statistics, and others he was able to furnish, had been collected from records of eighty-six cases that had come into his possession, mainly through his connection with the St. Luke's and Presbyterian Hospitals as pathologist, and also through the New York Pathological Society. All of the cases had been restudied during the summer of the past year, and in all thirty-six cases were sufficiently complete to furnish material for statistical work. He enumerated some of the chief points that he had elicited. Carcinoma (all varieties) never appeared before twenty-eight or later than seventy. In ninety-seven per cent. it attacked the female breast, and in three per cent. the male. Usually it was the right breast. The most frequently assigned cause was some form of traumatism, including under that term such accidents as a blow, the chafing of corsets, friction of the breasts against a washing-board, mammary abscess, injury by child during lactation. Heredity was a factor that was assigned in a much smaller number of cases, say in one-sixth. In about seventy-three per cent. the previous health was said to have been good. Recurrences took place, on the average, about the tenth month after the operation; but, if the patient had no recurrence during three years, a cure might be predicted. This conclusion was singularly precise in its agreement with the statements of Dr. Gross. The last recurrence occurred exactly at the thirty-sixth month.

As to the matter of cure, he was glad that he was able to say of metropolitan practice that it just about reached the high standard of excellence set by Dr. Gross. Taking thirty-one cases in which this matter could be properly studied, and accepting the fact that no recurrence had taken place for three years after operation, a cure might be claimed. Dr. Satterthwaite was able to say that three cases were definitely cured. This was a percentage of 9.68 per cent. In these cases the period of immunity lasted from six to ten years. On the other hand, a check was given to the disease in two cases, the duration of life after the origin, the disease being respectively about five and twenty-four years. He was also able to say that the dangers of the operations in this vicinity were trivial as compared with the statistics of Dr. Gross. The actual mortality, carrying the computation to the eighth day after the operation, was less than three per cent.

In conclusion, he had a word to say upon the comparative advantage of early and late operations. This was a topic, he was free to confess, he approached with hesitation, because the statistics, both on this and on another occasion when he had studied them, gave little encouragement to the surgeon who advocates early operation. And yet he felt impressed with the idea that early operations, and in recurrence, frequent operations offer the best chances of securing immunity or retardation. To be brief, there was a disturbing element in the computation, and it was the fact that benign tumors became unavoidably confused with the malignant. That he believed to be the case in the examples of cure or retardation already alluded to. Thus, in the cases of cure while two were operated on early—one at the end of four months and the other at the end of six—the third went five years without operation; and in the retarded cases, one was not treated surgically until two, and the other until eighteen years had passed after trouble was first noticed in the breast. Could it not be, and was it not probable, from the history, that these instances of late operation were in cases where the growths were at first benign?

Perhaps, at a later period in the study of tumors, when the number of carefully recorded cases is much larger, such as these might be thrown out of the calculation, and we should be able to decide this very important question.

The President remarked that, at the time Dr. Willard Parker made his communication upon this subject to the Library and Journal Association, he was called upon to make some remarks, and then threw out the suggestion that age had a decided influence upon the probable recurrence of the disease after the original tumor was removed with the knife—the liability to recurrence diminishing as age increased. That point he had not seen mentioned by any writer, and he would be glad to have the experience of surgeons with reference to it.

Dr. Lewis A. Sayre said he was early taught to leave cancer of the breast undisturbed by surgical interference, but during the last twenty or thirty years he had pursued another line of practice. Since the teaching of Atlee, in 1846 or 1847, that arsenic should be employed in these cases, he had uniformly used it after removal of the breast, and whether or not it had anything to do toward prolonging life he was not positive, but at all events some of his patients had lived twenty years after the operation, and without return of the disease. His experience accorded with the general principles inculcated by the paper.

Dr. Frank H. Hamilton thought that the central point of the discussion was whether cancer is primarily a local or constitutional disease. If it is local, it should be cut out, and the earlier the better before it invaded the entire system. Opinions seemed to be more and more confirmed in the direction of primary localization of the disease. Upon that point he had entertained a doubt, but it had always been exceedingly small. So far as cancer of the breast was concerned, he had observed that it occurred most frequently at that period of life when the organ was undergoing the change incident to cessation of function. Certainly there was no evidence in that fact of constitutional fault, for it was a purely local decadence which was taking place. The same thing had been observed with reference to the uterus, and such facts pointed toward a local origin. He also believed that an argument might be drawn from the consanguinity of the affection. Epithelioma was regarded as primarily a local disease in the majority of cases, but there is a time when it may become a constitutional disease. He also believed, with Dr. Satterthwaite, that milder forms of these diseases might pass into the malignant. Now, if the disease is local, the earlier it is removed the better. A little later its atmosphere must be removed, and a little later still its prolongation into lymphatics. By so doing, the disease was retarded in its progress, if not arrested

Dr. A. C. Post had always been in favor of the early removal of cancer of the breast, and also in favor of following the disease with operation so long as it recurred in situations where the relations of the surrounding parts admitted of surgical interference with the knife.

A remarkable case was cited in illustration of the benefit which might follow repeatedly attacking the disease with the knife. A surgeon in Virginia, dead for many years, removed the original disease, removed the secondary growth the next year, and then followed it year after year and during ten years, performing nine operations in succession; and after the last one the patient remained under observation for ten years, and continued well. The ultimate result he was unable to give.

The operation should be performed at an early period, while the disease is of limited extent. After the disease has involved lymphatic glands in the axilla, he thought it proper to perform it if the adhesions were not so extensive that the disease could not be removed. He believed that a partial operation is fraught with mischief. There might be exceptional cases where temporary relief might be afforded by removal of only a portion of the diseased mass. But, as a rule, it was better not to interfere unless all the adjacent tissues were removed. With regard to the suggestion made by the President, that cancerous disease was of slow progress and infrequent recurrence the later in life it appeared, he had been of that opinion for a long time, and had seen it in print many years ago. When cancer was removed after seventy years of age, there was prospect of long freedom from return of the disease.

Dr. Willard Parker's conviction was that, in selected cases, an operation for the removal of the breast and affected tissues should be performed. Some cases should be let alone. Out of four hundred and fifty cases, which had been under his own observation, some had done very well when there seemed to be no chance whatever for benefiting the patients by operation. His own observation had led him to the conclusion that the disease is not hereditary. He also believed that it is not a primary disease, but always has a starting-point in some abnormality. It may begin in a sore upon the cheek, or lip, or some benign growth, but never has its origin in a physiological basis. A benign growth may be carried for years, and then suddenly change in character, become painful, its blood-vessels enlarge, and soon present all the usual appearances of malignant disease. He believed that the great exciting cause of cancer was traumatism, but what is it that antedates the action of the exciting cause? The great question was: How shall the disease be prevented? If the system can be revolutionized and brought back to a physiological condition, we might hope for good results. It was in that direction that attention should be turned. A mere operation is surgeon's play; to save the patient makes the man godly. Dr. Parker referred to cases in which he had operated with very favorable results, and among them one especially interesting, because the breast (enormously enlarged and sloughing) was removed, many years ago, simply to rid the patient of the foul mass and afford temporary relief; but the woman made a good recovery and still lives; the disease has not recurred and she is in good health (see Medical Record, vol. viii., p. 431).

Dr. Charles A. Leale presented a photograph of a patient from whom he removed a breast completely together with the axillary glands. The tumor was ulcerated when the operation was performed. The wound, seven by thirteen inches, healed by first intention except in the hollow of the axillary space, where a granulating surface was finally covered after several applications of nitric acid. The operation was performed in February, 1880. The cicatrix remained red. The patient was put upon the use of arsenic, and the drug, in the form of Fowler's solution, was carried to the extent of producing very marked general symptoms, and the color of the cicatrix soon began to change and became nearly normal. Only a very moderate amount of hemorrhage occurred when the breast, with the axillary glands, were removed, although the axillary artery was raised upon the finger for the purpose of reaching deep-seated diseased glands. There had been no evidence of recurrence of the disease. The patient still took arsenic in small doses. The case illustrated the benefit by prolonging life which an operation could afford, and also, as it seemed to Dr. Leale, the favorable effects produced by the use of arsenic in these cases.

Dr. Austin Flint referred to a case which came under his observation thirty years ago. The patient was forty-five or fifty years of age, and had an affection of the breast that presented all the gross appearances of scirrhus. Dr. Frank H. Hamilton advised an operation and performed it. The disease did not return. The woman lived more than twenty years after the breast was removed, and died of a disease other than cancer.

Another patient came to see him ten years ago. She evidently had scirrhus of the breast, which was removed and shown by the microscope to be cancer. Within two years the disease returned twice in the neighborhood of the breast, and in both instances it was removed by operation. Since the last operation she had enjoyed excellent health, and was still living.

The President referred to the change of opinion which had taken place within thirty years. Surgeons have now reached the conclusion that there is a possibility, in a good percentage of cases, of arresting the disease by operation—certainly of retarding its progress—and prolonging life, whereas the almost uniform teaching used to be to avoid operating for the removal of a cancerous breast. There are, however, many at the present time, probably, who believe that the cases are numerous in which an operation should not be performed. The President then referred to one case in which he removed a cancerous breast in 1860. The disease, after microscopical examination, was decided to be cancerous. The specimen was presented to the New York Pathological Society by Dr. Foster Swift, and in the journal in which the report of the case appeared, credit for the operation was given to Dr. Parker instead of Dr. Barker, which was a fair illustration of the uncertainty of surgical glory. It was in that case that acupressure was used for the first time in this city, and with very satisfactory results, only a small amount of suppuration ensuing (see Medical Record, vol. viii., p. 435). The patient, at the time of the operation forty-three years of age, still lives, and is in the enjoyment of good health.

With reference to arsenic in the treatment of cancer, he believed that it can be used internally with positive advantage.

Dr. Gross, in closing the discussion, said that the 17.87 per cent. of mortality from the immediate effects of interference, was accounted for, to a certain extent, by the mode in which the axillary wound was treated. Instead of veins being ligated, the wound was stuffed with material which caused the

secretions to be pent up, and pyæmia and septicæmia and other bad accidents followed. The operations which were followed by such a rate of mortality were not performed in English and American hospitals, but for the most part in Germany, where the mortality had been notoriously high.

He had removed the breast in seventy-two cases: seventeen by the thorough operation, fifty-five by the common operation, and he had lost only two patients, or less than 1.5 per cent. At most the mortality should not reach five per cent. He thought that surgeons should expect better results than preventing the extension of the disease in 10.87 per cent. of all cases of cancer of the breast; that was the limit obtained by *all kinds* of operations. But he had presented the more thorough procedure, believing that if it was more uniformly practised, better results than those already given could be obtained.

Recurrence of carcinoma after the ordinary operation was the rule, and generally in the line of the cicatrix. It was his point, and he regarded it as the most important, Why do we leave anything in which the disease may recur? To rid a field of large weeds and leave the little ones standing did not cleanse it; the farmer must remove the small weeds as well as the large, if he would not have his crops destroyed. The thorough operation was not especially serious. He had lost only one patient out of the seventeen upon whom he had performed it, and in that case the patient was a bad subject, enormously fat, and she died on the *third* day, from causes unknown. The disease recurs in the skin—if not in the skin, in the subcutaneous connective tissue and fat. Hence, why leave these tissues behind? His method of procedure is as follows: first palpate the entire mammary region, feel for lobules outside of the gland in the axilla, above and below the clavicle, and then, instead of making an elliptical incision embracing the nipple and a small portion of skin, remove the breast by a circular incision, remove the pectoral fascia, then secure blood-vessels, then prolong the incision into the axilla, which is to be explored with the finger thoroughly, and all glands in the least affected removed; ligate with catgut each vein which goes into the axillary veins and all the arteries, make a clean and complete dissection of the axilla, and then, after all hemorrhage has been stanched with hot water, a drainage-tube is inserted, and the lips of the wound approximated as closely as possible by stitches introduced one and one-half or two inches from edges, and the remaining space left to heal by granulation. In some cases it will be possible to approximate the edges of the wound accurately.

He believed that carcinoma is primarily a local disease, and the sooner such an operation for its radical removal was performed, the better.

On motion by Dr. Flint, the thanks of the Academy were tendered to Dr. Gross for his able, interesting, and instructive paper.

The Academy then adjourned.

Vaccination in Scotland.—Scotland is greatly in favor of vaccination. Dr. Robertson's report of the vaccination of children born in Scotland in 1879 states that only one individual refused to have his children vaccinated. Small-pox has not caused much trouble since 1874, in which year there were 1,246 deaths. In 1880 there were only 10 fatal cases. —*British Medical Journal.*

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 28, 1881.

Dr. T. E. Satterthwaite, President, in the Chair.

Dr. William H. Porter, on behalf of a candidate, presented a specimen of

MULTIPLE FRACTURE OF THE RIBS—CROUPOUS PNEUMONIA—INTERMENINGEAL HEMORRHAGE.

The President, on behalf of a candidate, presented a specimen of

DIPHTHERITIC LARYNGITIS.

Dr. William H. Porter presented a specimen of

RETICULATED ROUND-CELL SARCOMA OF THE ORBIT, WITH SECONDARY GROWTHS INTERNALLY CONTAINING MELANOTIC DEPOSITS,

removed from the body of a gray mare, twelve years of age. About one year before death, there was noticed, for the first time, a small tumor over the left eyeball, and evidently growing from the wall of the orbit. During the first few months after it was discovered, the tumor grew very slowly. In May, 1881, an incision was made into the growth, to ascertain whether it was solid or contained fluid. Nothing but blood oozed from the opening, and the tumor appeared to be solid. During the next four weeks the growth gradually increased in size. Late in June it was again cut into, and a small portion removed for microscopical examination, which showed that the tumor was sarcomatous, of the large round-cell variety, and not a melanotic, so frequently met with in the eye and in various parts of the body of white and gray horses. At this time sarcoma was diagnosticated and an operation advised, with the prospect of local or internal recurrence.

During the next two months the animal continued in fair condition and worked every day, the growth enlarging slowly.

In the early part of October, she suffered from the disease known as "pink eye," being laid up about ten days. By this time the tumor had attained considerable size, was growing rapidly, pushing the eyeball from the socket, and evidently giving the animal considerable pain. She was, however, again put to work, accomplishing the same with ordinary ease. Still it was noticed that she was gradually failing, both in flesh and strength, probably from the pain and annoyance of the growth in the orbit, as well as from the general disease.

October 23, 1881.—The mare being unfit for duty, an operation was decided upon. The tumor, which was quite firmly attached to the orbital wall, and completely filled the orbit, so that the whole contents of the orbital cavity were involved, was removed by Dr. E. Berry Ramsdell. The animal suffered severely from shock, but rallied completely at the end of a few hours. The edges of the wound were brought together by a few sutures, and cold dressings applied. It healed kindly, with scarcely any suppuration, and the animal was so much improved, that two weeks after the operation she was again at work. At first she seemed to gain both in strength and flesh.

Two weeks after she was put to work, it was noticed that the breathing was hurried and impeded. This interference with respiration gradually increased until December 10, 1881, when the animal was no longer able to work, and was placed in the hospital.

Two days later, a careful physical examination re-

vealed fluid in the left pleural cavity. A few days later a small quantity of fluid was detected upon the opposite side. Four days before death, the left chest-cavity was aspirated, and one gallon of clear, serous fluid drawn off. After the removal of the fluid, marked and extensive consolidation of the left lung was diagnosticated, and thought to be due to secondary deposits, as none of the rational signs of pneumonia were present. Some pulmonary consolidation was also detected on the right side. The left pleural cavity rapidly refilled with fluid, and the animal died four days later, December 21, 1881.

Necropsy, a few hours after death.—The operation wound was perfectly healed, and there was no evidence of return of the disease at that point.

Thoracic cavity.—The right pleural cavity contained about eight gallons of clear, serous fluid, the left equally as much. The diaphragm was a thickened mass of new growths; the costal pleura was covered with round tumors, varying in size from that of a pea to that of a hen's egg. The right lung was also thickly studded with pinkish white masses, varying much in size. Most of the growths, especially the smaller ones, were of a soft consistency; some of the larger ones seemed to have also some fibrous elements. New growths were distributed through the left lung, over the left costal pleura, and in the diaphragm, but were really more abundant than upon the right side. Some of the abdominal organs seemed to be involved, but, owing to the incompleteness of the necropsy, nothing positive was determined upon that point.

Examination of the tumors macroscopically.—They were whitish in color, marbled with a pale pink. In some of them, dark, almost black, spots were met with, as if they were deeply pigmented. The smaller masses were very soft when isolated, and easily broke down under the slightest pressure. When only a single mass existed at a given point, it seemed to be encapsulated by a thin layer of distinct tissue.

Microscopic examination.—Scrapings of the juice from the cut surface showed only large round connective-tissue cells and blood-corpuscles. Sections from the tumors show at points a distinct reticulated structure, closely packed with these large round cells; at other points only large round cells imbedded in a homogeneous matrix could be seen—the growth resembled somewhat a medullary carcinoma—they, however, were very vascular, and contained numerous extravasations of blood. The black points recognized with the naked eye appeared under the microscope like the deposits in the melanotic sarcoma found in the human body. It was without doubt blood-pigment, and not masses of carbon parotitis, commonly met with in lung-tissue. In sections made from the tumors in the lung-substance, numerous yellow elastic fibres were seen running in various directions; also, in many instances, the true pulmonary tissue was present. This condition would lead one to suppose that the new material had been deposited in and around the vesicular tissue, and not at its expense. In some of the larger masses, considerable fibrillated connective tissue had been developed, forming numerous bands, running in various directions. The microscopic appearance of the primary tumor and the secondary deposits was almost identical.

The specimen was interesting as an illustration of a third form of sarcoma in the lower animals, also as a specimen in comparative pathology. In a surgical point of view, the case showed what relief can be given to animals as well as man, and the health was apparently improved. The improvement of the animal after the operation would, in future, be a warning to surgeons to operate early and thus relieve the suffering, and perhaps prolong life.

Dr. J. C. Peters remarked that "pink-eye" in horses was analogous to scarlatina in man; at least the two diseases had several symptoms in common, the most prominent of which were swelling of the glands of the neck, swelling of the legs, and disturbances of the kidneys. He thought it to be undoubtedly contagious among horses, but had never heard of its being transmitted from animals to man. The French had regarded it as a form of scarlet fever occurring in horses.

INCARCERATED FEMORAL EPIPLOCELE—REMOVAL OF THE MASS—RECOVERY.

Dr. Wyeth presented a specimen, with the following history: The patient was a German by birth, forty-two years of age, and a laborer. His family history was unimportant, except that his father had a hernia. Twenty years ago he had gonorrhœa and an accompanying swelling in the right groin, and occasionally "cramps" at this point. The tumor diminished to a small lump, half as large as an egg. At varying intervals, up to 1881, the swelling had increased and diminished, giving him always more or less inconvenience. Two weeks before admission, while doing heavy work as a railroad hand, the tumor suddenly increased in size, and gave him great pain. During the following night he vomited profusely. The next day, he says, the tumor was partially reduced by a doctor. On admission, patient in good general condition; hard, non-elastic swelling, as large as a hen's egg, in right "Scarpa's space," which was irreducible. Diagnosis: incarcerated femoral epiplocele, and operation advised, since his condition would not admit of his wearing a truss, and it was impossible for him to work without it. June 12th he cut down on the mass, followed it into the outer opening of the femoral canal, which it completely plugged, removed the sac, and having tied the neck of the epiplocele securely, it was cut away. The patient recovered, and was discharged as cured on the 24th of July, forty-two days after the operation.

At the time of this report, over six months after the operation, the patient is able to work as a laborer by wearing a truss. Upon the removal of the truss, a slight hernia, which is readily reducible, protrudes at the femoral canal.

Dr. Wyeth also presented a specimen of

CYSTO-ADENOMA OF THE THYROID

removed by operation. (See p. 94.)

Dr. Beverly Robinson presented three specimens, with histories, furnished by Dr. William C. Campbell, house physician at St. Luke's Hospital.

The first was a specimen of

ATROPHY OF THE LUNG,

removed from the body of A. B——, thirty-five years of age, a native of Germany, and a pianotuner, who gave a family history of pulmonary phthisis, and a personal history of having suffered from that disease during the last three years.

At the autopsy, both lungs were found firmly bound to the chest-walls by old adhesions. The *right* was markedly emphysematous; was the seat of hypostatic congestion in the lower, and of fibrous phthisis in the upper half, and the upper portion of the middle lobe was tuberculous. The lung was en-

larged, so as to extend over upon the left side considerably. Its weight was two pounds and fourteen ounces. There were evidences of chronic bronchitis. The left lung was compressed upward and backward against the vertebral column, and was about the size of a closed hand. The first bifurcation of the bronchus extended to the limits of the lung, and the pulmonary tissue about it was in a state of cheesy degeneration. The air-cells were completely obliterated. Weight, twelve and one-half ounces.

The *liver* was enlarged and fatty. The *kidneys* were large and white. The pericardium contained half an ounce of clear serum; there were a few longitudinal adhesions upon the left side of the heart; the ventricles were distended with currant-jelly clots, and the valves were normal. The interest in the specimen centred in the condition of the left lung, probably due to the contraction of a hypertrophied pleural membrane, the result of a previous pleurisy.

The second specimen was a heart, removed from the body of C. S——, thirty-four years of age, married, who was admitted December 3, 1881. It illustrated extensive

CALCAREOUS DEGENERATION OF THE AORTIC AND MITRAL VALVES.

The patient gave the history of rheumatism occurring at various times since he was ten years old. Twelve years ago he first began to have palpitation. There were no cerebral symptoms. The attacks were of short duration, and occurred at long intervals. The patient did not suffer very much until last October, when he had severe attacks of dyspnœa and coughing, and at the same time the swelling of the ankles, which had been slight during the summer, became very marked. On admission, it was found that the area of præcordial dulness was increased; the apex was beating in the left sixth intercostal space; and there was undoubted evidence of aortic and mitral regurgitation. Subcrepitant râles were heard posteriorly at the bases of both lungs. The urine contained hyaline and epithelial casts, albumen thirty per cent., had an acid reaction, and a specific gravity of 1020. The patient died comatose, December 19th, the heart continuing to beat for thirty seconds after breathing had ceased.

The third was a specimen of marked

MITRAL STENOSIS.

The heart was removed from the body of J. D——, thirty-eight years of age, a widow, teacher, who was admitted November 19, 1881. For the last seven years the patient was a confirmed invalid, suffering from dyspnœa which gradually increased in severity. There was no œdema. She gradually lost flesh and strength, but was able to attend to her duties until within a month of her admission to the hospital, when she was prostrated with symptoms of pelvic abscess. When admitted she was extremely anæmic, weak, vomited occasionally, and complained of great distress in the region of the stomach after eating. She was restless and suffered from insomnia, and her bowels were constipated. There was no œdema nor cerebral symptoms. The urine had a specific gravity of 1030; reaction acid, microscopical examination negative, contained abundance of urates. A presystolic murmur was heard with its greatest intensity about the middle of the space between the left nipple and the centre of the sternum. There was no purring thrill. There was marked dyspnœa. The pulse was irregular, although strong. The diagnosis of mitral stenosis and regurgitation was made. The dyspnœa increased, the patient became delirious, sank into a comatose condition, and died November 30th at three A.M.

The autopsy was made December 1, 1881, by Dr. E. C. Wendt. The upper half of the body was somewhat emaciated; the lower half was well nourished. Slight œdema of the lower extremities. Rigor mortis absent. Twenty ounces of flocculent fluid was found in the abdominal cavity. There were twenty-four ounces of fluid in the right, four ounces in the left pleural cavity, and four ounces in the pericardium. [There was no evidence of fluid in either of these cavities at the last examination, twelve hours before death.]

The right lung contained several recent hemorrhagic infarctions in the lower part of the upper lobe, and there was a single small one in the posterior part of the left lung.

The *heart* weighed thirteen ounces. The cavities of its right side were dilated. There was marked stenosis of the mitral orifice, not admitting a single finger; the curtains of the valve were contracted and cicatricial. There was no hypertrophy of the left ventricle, and only very slight dilatation. The aortic valves were normal. The *liver* presented the nut meg appearance, and was enlarged. The *kidneys* were congested. The *stomach* presented evidence of gastritis. The *spleen* was small. The *uterus* was bound down by adhesions, and an abscess was found in the left ovary.

Dr. Robinson remarked that he had often heard of and had read of the existence of mitral stenosis and of its being diagnosticated before death, but he had not been able to find a case in which such a diagnosis was made and afterward confirmed by autopsy, until he obtained the specimen presented.

THE PRESIDENT remarked, with reference to the question of the complete destruction of lung-tissue, that it was a very common saying that patients had only one lung left, but he had never, except in one instance, seen so complete absence of the aërating structure of the lung as was manifest in the specimen presented. In the specimen referred to, an account of which had already been published by Dr. Alonzo Clark (see MEDICAL RECORD, vol. x., p. 1), the nodule was still smaller than that in the specimen presented by Dr. Robinson, and death occurred as a result of hemorrhage from the other lung. He believed it to be rare to find such complete obliteration of the lung as seemed to be present in the specimen Dr. Robinson had exhibited.

DR. WILLIAM H. PORTER said that in the specimen which he presented at the last stated meeting of the society, there was no lung-tissue remaining, it was simply a fibrous mass (carnification of the lung the result of pleurisy with effusion and empyema). It was the left lung that was affected; the right lung, in his case, did not project beyond the median line.

The society then went into executive session.

PREGNANCY, WITH EPITHELIOMA OF THE CERVIX.—A case of pregnancy at the sixth month, with epithelioma of the cervix, was reported to the London Obstetrical Society by Dr. Edis. The Porro-Freund operation was inadmissible, because the vaginal wall was implicated. The question of what onght to be done was discussed. The conclusion of most was that the woman should be allowed to go on to full term, then the Cæsarian operation might be performed.

OBSTETRIC SECTION OF NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 27, 1881.

DR. HENRY E. CRAMPTON, CHAIRMAN.

THROUGH AND THROUGH DRAINAGE IN CHRONIC PELVIC ABSCESS.

DR. CHARLES A. LEALE gave a history of the following unique surgical operation for the relief of pelvic cellulitis of over thirteen years' duration, when the pelvic abscess had discharged through a rent into the rectum one inch above the internal sphincter ani muscle.

Mrs. S——, thirty-three years of age, otherwise perfectly healthy, at the age of nineteen years had an abortion at six weeks, followed by metritis, pelvic cellulitis, and painful adhesions, giving her distress at each subsequent menstruation. During the summer of 1881 she came under the care of Dr. J. H. Fruitnight, who, after getting her in as good a condition as possible, requested Dr. Leale to see her with him on October 21st, to decide in regard to the propriety of performing an operation for a permanent cure of the large pelvic abscess. On that day they found that very large quantities of pus discharged from the pelvic abscess through an opening into the rectum about one inch above the internal sphincter ani muscle, and October 25th was named as the day for operating. Present, Dr. Leale, Dr. J. H. Fruitnight, Dr. A. M. Jacobus, Dr. Harwood, and Dr. Wm. Fruitnight. A grand square piano, covered with a thin mattress and blanket, gave an excellent operating-table. The patient was readily brought under the influence of sulphuric ether by Dr. William Fruitnight, and after being placed in the position for lithotomy, a thorough investigation was made to complete the diagnosis. While doing this with a Nott's speculum in the rectum, large quantities of exceedingly offensive fecal pus were seen flowing from the pelvic abscess through the large fistulous opening into the gut. By vaginal and external manipulation a mass was found, the size of a fetal head at nine months, filling the pelvic cavity. When pressure on this was made, pus flowed from the rectal opening. The pus in the abscess contained particles of fecal matter, showing that fæces passed into the suppurating pelvic cavity, demonstrating an additional source of irritation. The offensive smell was beyond description, and had been the most loathsome part of the trouble for the sufferer to bear. On introducing the finger through the anus the sinus was easily felt, and, as an extensive suppurating cavity existed, it was decided to make the *through and through drainage*, as being the best to accomplish the most effectual result. Accordingly Dr. Leale made an incision in the right groin, below Poupart's ligament, the same as he does for inguinal hernia, and extended the opening through the abscess-cavity of the pelvis into the rectum, at the point of the fistulous opening, without entering the peritoneal cavity; through this opening he drew a drainage-tube, No. 12, English measurement. Pus flowed freely through this tube, but it was thought advisable to have a second drainage through the vagina, thereby having one drainage from the groin to the rectum and out by the anus, and another through the groin to the abscess-cavity, through Douglas' cul-de-sac, and out by the vagina. The old pelvic abscess could now easily be washed out by streams of weak disinfectants, and applications made to the pyogenic membrane. On the seventh day after the operation, October 31st, the patient was in a very comfortable condition. There had been no peritonitis, and the wounds were suppurating well; two or three times a day the pus was washed out, and all appeared in a prosperous condition to accomplish the desired result, viz., a complete cure after trouble of over thirteen years' duration. As usual in these cases, the patient had taken morphia for a long time.

Dr. C. A. Leale stated that he had seen a similar case to that noticed by Dr. J. Lewis Smith, where the ulceration of the bowels and subsequent perforation caused what is known as a cold abscess, and lasted for years, which he finally cured by an operation through the abdominal walls at the cæcum. He considered that these idiopathic instances of inflammation of the cæcum and its surrounding areolar tissue occasionally lead to perforative ulceration, and was generally followed by circumscribed peritonitis and an abscess. This abscess tended either to discharge spontaneously into the intestine, in which case temporary recovery usually followed, or to rupture into the cavity of the peritoneum, when usually death soon ensued from shock or exhaustion.

Dr. Leale gave the following histories of two cases operated on by him:

ABSCESS EMPTYING INTO THE CÆCUM.

A. W. G——, aged fourteen years, had always been a delicate boy since the age of two years, when, from improper diet, he contracted gastro-enteritis, and, as a sequel, bloody dysentery followed for several months. His mother was strumous, and his father, at the time of operation, was an inmate of the Lunatic Asylum, Blackwell's Island. The father had never had syphilis, but was rickety, and had a large, irregular cranium. The child had always been feeble, and since his attack of intestinal trouble at two years of age, he had tenderness, on pressure, in the right ileo cæcal region, with occasional tumefaction and fever. The mother noticed that his trouble was always relieved when he passed pus in the evacuations from the bowels. The original abscess had opened into the intestines at the cæcum, so far as could be judged, and while this abscess continued to discharge the boy kept well. When the pus accumulated, unpleasant symptoms followed until nature afforded an exit by the perforation of the bowel. Thus he continued in a delicate condition until the operation, June 9, 1872.

Ten days prior to that, while at a picnic, and taking unusually violent exercise, he was suddenly seized with intense pain in the right iliac region. He had profound collapse, and was carried home, after which a hardness and tumefaction at this point increased, but there was no discharge of pus from the bowels. When Dr. Leale first saw him, deep-seated, circumscribed fluctuation was detected. He had hectic fever and great pain on pressure. Dr. Leale made an opening with a scalpel one-third the distance from the anterior superior spinous process, on a line to the umbilicus and through to the deep fascia; then he explored with a needle passed through the peritoneum, and on finding fecal pus by suction with a hypodermic syringe, made an incision one inch long, evacuating very thick, cheesy pus, having an intensely offensive smell. The wound discharged freely, and was kept cleansed with liq. sodæ chlor. dil. for seven days, after which it healed, never again to refill, and two years after the opera-

tion the boy was in the enjoyment of good health. His right leg, because of partial disuse for so many years, was half an inch shorter than its fellow, and its symmetrical development permanently prevented.

Dr. Leale also gave the history of the following case of

PERFORATION OF THE APPENDIX VERMIFORMIS.

G. S——, aged twenty-three years, had a circumscribed hardness, commencing in the right iliac fossa, and gradually extending in all directions from the position of the cæcum, until it reached a circumference of over twelve inches. He was kept as quiet as possible, anodynes given to allay pain, and hot fomentations were applied directly over the seat of the induration, until fluctuation could be detected. Dr. Leale first explored with the usual-sized exploring-needle, followed by the director. Subsequently, on enlarging the opening to the extent of one inch, at least ten ounces of exceedingly offensive fecal pus came out.

In the discharge six or eight small masses of fæces were extruded, which were of the shape and size of those usually found in the appendix, showing that they must have been moulded as they passed through this small opening from the intestines. The patient being exceedingly thin, the boundaries of the abscess could be easily felt externally with the fingers, by gliding the end of a silver catheter around the cavity.

The cavity was kept thoroughly cleansed, and all done to increase the appetite and strength of the patient. In two weeks convalescence was complete, excepting a weakness of the abdominal walls, which remained for months. To prevent a rupture he wore an abdominal supporter for a year, after which time there was no further trouble.

Stated Meeting, December 22, 1881.

DR. HENRY E. CRAMPTON, CHAIRMAN.

DR. JOEL FOSTER reported a case of

PELVIC CELLULITIS, WITH ABSCESS,

of four or five months' standing, and spontaneous rupture into the vagina. The patient was sixty-one years of age, and had not suffered from any symptoms, except slight pain, and the gradual growth of a tumor beginning in the lower part of the abdomen, upon the right side, and finally reaching considerably above the umbilicus. The abscess discharged about one quart of offensive material. The walls of the abdomen at the last examination were pliable; no tumor could be felt, but the cervix was hard and enlarged, and suggested to him the possibility of cancer. The opening through which the abscess evacuated itself was situated about half an inch to the right of the cervix.

DR. H. T. HANKS believed that Dr. Foster's case was one of suppurative pelvic cellulitis, and that the induration remaining would probably, at least to a large extent, disappear. At all events, the hard enlargement of the cervix doubtless was benign in character.

STENOSIS, WITH IMPERFECT DEVELOPMENT AND MALPOSITION OF THE CERVIX UTERI.

DR. A. C. POST narrated a case as follows: The patient was twenty-two years of age, unmarried, and had suffered severely from dysmenorrhœa ever since the beginning of menstruation. The cervix uteri seemed to be imperfectly developed; it inclined backward rather than forward; the orifice of the external os admitted only the smallest size Peaslee's sound, and he was unable to introduce any instrument, either flexible or solid, and bent at different angles and turned in all directions, more than one inch. That there was a cavity beyond that depth, rudimentary at least, he did not doubt. He instituted gradual dilatation as the especial plan of treatment, and supplemented it with vaginal injections of hot water. The result had been that he was able to pass the largest size of Peaslee's sounds easily, and to nearly the normal depth. The patient still has pain at the menstrual period, diminished in severity, however, and her general health has improved very much. The position of the cervix had changed during the treatment, so that the instrument finally passed in the normal direction.

EXTREME UTERINE FLEXION—DILATATION—CONCEPTION.

DR. A. S. HUNTER reported a case as follows: A sterile woman had corporeal flexion of the uterus to an extreme degree, the organ being rolled up so as to be nearly round. She had suffered intensely from dysmenorrhœa, had had such severe straining and bearing-down pains, and for so long a time, that the uterus was upon the floor of the perineum. The treatment consisted in the use of hot-water vaginal injections, maintaining the pelvis in an elevated position for half an hour after each one, and, after the congestion and tenderness had subsided, introducing a laminaria-tent, previously wet, shaped to correspond to the curve of the cervical canal, and dried. The patient was kept in bed while the tent was in, and the dilatation occurred without accident. Afterward he used a bivalve dilator, carrying on the dilatation gently, and finally succeeded in reducing the curve in the uterus considerably. The woman conceived, and subsequently passed through a normal labor. Her pregnancy was quite painful, the pain being due, as Dr. Hunter suggested, to traction upon the shortened anterior wall of the uterus. To relieve or diminish the uterine irritation, he administered, four times daily, ten drops of the mother-tincture of

CAULOPHYLLUM THALACTOIDES,

and with very marked benefit. He had used this drug in several cases in which a uterine sedative seemed to be indicated, and with good results in each instance. There was some difficulty in obtaining a reliable tincture of the drug.

DR. GRISWOLD narrated a case as follows: Three months ago he was called to see a primiparous woman, who had been in labor one week, during which time there had been constant flowing of amniotic fluid, stained with meconium. By ordinary digital examination he was unable to find the os uteri. The patient was then placed in the Sims position, when he thought he detected something high above the pubis that appeared as if it might be the os. On the next day the woman was anæsthetized (ether), the vulva dilated, and the os found high above the pubis; the cervix was small, but very dilatable. The finger was introduced, dilatation carried on, and soon it engaged in the internal os. Then, by means of external pressure, with the fingers in the cervix, he was able to rotate the uterus into place, and found that the feet were presenting, with the face forward. The child was macerated so that the epidermis readily slipped off, but he suc-

ceeded in turning it without difficulty, and nearly completed the delivery, when further progress was entirely arrested, although he endeavored for some time to terminate the labor without resorting to the use of instruments. Not succeeding, he applied the forceps, and while making almost no traction, something suddenly gave way, and the delivery was at once effected. On inspection, it was found that complete rupture of the perineum had occurred. The wound was closed immediately, and the woman recovered without a single bad symptom, although there was a case of sepsis in the same house. All that he attempted to do in the primary operation was to close the rent in the rectum, leaving the perineum to be operated upon subsequently. One point in the after-treatment consisted in *keeping the bowels open from the beginning*, and that was accomplished by the conjoined use of enemata and teaspoonful doses, a half-tumblerful of water, of the compound licorice powder (German Pharmacopœia). Examination also revealed as the original source of the difficult labor, a large subperitoneal fibroid attached to the side of the uterus, and partly engaged in the broad ligament.

℞. Pulv. glycyrrh. rad. and pulv. sennæ. ..āā ʒ ss.
Sulphuris sublim. and pulv fœniculi... āā ʒ ij.
Sacchar. purif. ..... ʒ iss.

M. S.—Teaspoonful a half-cupful of water at bedtime.

Dr. A. S. Hunter said that the last seven or eight times he had operated for lacerated perineum he had not tied the limbs together nor drawn the urine, and he had allowed the bowels to move. In none of the cases had he had any reason to regret adopting that plan of after-treatment. He believed that the knees might be separated to the extent of eighteen or twenty inches without putting any strain upon the perineum. If the laceration was closed immediately after delivery, it was desirable to afford opportunity for all the secretions to flow away; but if the limbs were kept close together, the position favored the retention and percolation of the lochia and other discharge between the torn surfaces. He believed that primary union was favored by allowing the limbs to be separated. If the surfaces were properly united, the urine would not get between them and prevent primary union, and certainly union by first intention would not take place unless the surfaces of the wound were brought into complete coaptation.

Dr. H. T. Hanks believed, with reference to keeping the knees together, that there would probably be no trouble in allowing them to remain free, provided that, when the limbs were flexed or separated, the flexion or separation was equal upon both sides; but there was such a possibility that the woman might draw up one limb sufficiently to certainly separate the parts, he thought it not well to take the risk and leave the limbs unfastened. The discharge of the secretions could be favored, as well as the irksomeness of the restrained position be relieved, by placing a sponge between the knees.

With reference to drawing the urine, it had been his custom to use the catheter himself during the first twenty-four hours, after which the patient was permitted to pass her water without assistance.

With reference to the bowels, he favored keeping them open from the beginning. Dr. Hanks also advised the immediate operation when it was possible to perform it. He had performed it in thirteen cases, and in only two had the secondary operation been required, and in every instance where he kept the bowels open the results were all that could be desired.

Dr. Hunter recalled two cases in which the bowels were kept confined for a week or more, and then opened with castor-oil followed by enemata, and careful breaking up of the fecal masses as they came down into the rectum. The results were excellent.

Dr. Hanks did not doubt that good results could be obtained when the evacuation of the bowels was carefully and personally superintended, as it had been by Dr. Hunter; but he believed that the chances of securing such attention were not good in very many cases, and that satisfactory results would be obtained, under ordinary circumstances, more frequently by keeping the bowels open than by securing constipation.

Dr. Foster said that in quite a large obstetric practice, during the last thirty years, he had not had a case of rupture of the perineum which required an operation. His plan of management had been to keep the limbs together for several days, draw the urine regularly, and move the bowels with enemata, rather than cathartics, when desired. He did not disapprove of the operation, however, in appropriate cases. He thought it possible to determine by digital examination whether or not rupture had occurred.

Dr. Griswold said that he did not draw the urine after the first day. He thought it impossible to detect the rupture in most cases by the finger alone.

The section then adjourned.

NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE AND PREVENTION OF INSANITY.

Annual Meeting, held in Municipal Hall, New York City, January 20, 1882.

Dr. H. B. Wilbur, President, in the Chair.

The President opened the meeting with a brief statement of what the association had accomplished, and what it proposed for the future. Public sentiment had been much awakened by the work of the society, many asylum superintendents had joined it, and a more progressive spirit was showing itself among all of them.

Four papers were read by Dr. Nathan Allen, of Lowell, Mass., Dr. E. C. Seguin, Dr. J. C. Shaw, and Dr. C. L. Dana.

The first paper, by Dr. Allen, was entitled

"INSANITY IN ITS RELATION TO THE MEDICAL PROFESSION."

The study of insanity was one, the speaker said, that had been greatly neglected by the medical profession. There were as yet only three or four medical colleges in the United States in which there was a special professorship of mental diseases, or even a course of lectures devoted to the subject. Indeed, so little attention was paid to this important department of medical science, that scarcely ever was a text-book on insanity comprised among the standard works for study.

The American Medical Association, when it was first organized in 1847, created a department of Psychological Medicine. It so happened, however, that the superintendents of our insane hospitals had, just

prior to its organization, formed a small association of their own, and they were not inclined to join the larger body, or to work with it in the discussion of their specialty. The result was that this section of the association did not start under favorable auspices, nor find the ready workers that were required to render its proceedings of large professional interest. The speaker next reviewed the history of the American Association of Superintendents of Lunatic Asylums, now thirty-five years old. Its discussions were, he admitted, occasionally important, and a quarterly journal was issued in its interest. The latter had, however, a very limited circulation, and its perusal was confined almost wholly to specialists. It had done little to enlighten the great body of the profession on the pathology or treatment of insanity, its principal object having apparently been to build up a class of experts in insanity, and to place in their hands the treatment of the disease and the management of the lunatic asylums of the country. Dr. Allen referred to the methods of committal and management in vogue in Great Britain, and compared them with American methods. Under British law, every physician signing a certificate of committal was required to write down the distinct evidences upon which his opinion had been formed, and to state explicitly such facts as he had obtained from others as to the mental alienation of the patient, while in this country, if a husband and wife got at variance with each other, or an individual was addicted to the opium habit or had a large property of which his heirs-at-law wished to obtain the control, men could be found to sign the necessary papers and the person was committed to a lunatic hospital. Dr. Allen spoke in conclusion of the trial of Guiteau as a striking illustration of the lack of exactness and coherence in our methods of dealing with the problems of insanity.

The paper by Dr. C. L. Dana was entitled

"THE ASYLUM SUPERINTENDENTS ON THE NEEDS OF THE INSANE."

It was based upon the study of the annual reports of all the different asylums in the country.

A large number of statistics were given. The number of insane in 1880, of which any census could be obtained, was estimated at over 63,000, giving a ratio to the population of about 1 to 777; that of 1860 was 1 to 1,310. The ratio varied in different parts of the country, being for New England about 1 to 580; for the Middle States, 1 to 600; for the West, 1 to 850; and for the South, 1 to 1,100. The proportionate rate of increase was most rapid in the West, after that in the South. The less amount of insanity in the South was due in part to climate, in part to the presence of the colored race, which is less susceptible to the disease. It was suggested that the proportionate increase in insanity in America would not rise above 1 to 450 or 1 to 500, since in the past twenty years that ratio had not materially changed in the New England States. Legislators must expect, however, an increase of insanity up to 1 in 450 to 1 in 800, according to the section of the country. They should provide asylums for three-fourths of these, as was done in England.

The annual cost of caring for the insane was estimated at over $12,000,000.

There were 88 asylums, with about 300 medical men connected therewith.

A long list of the needs of asylums and of the insane, as given by the superintendents, was recited. The conservatism and absence of scientific spirit in the superintendents, as shown by their reports, was criticised.

Dr. E. C. Seguin read a paper entitled

"THE FUNCTION OF A CONSULTING STAFF TO A LUNATIC HOSPITAL."

The results of the speaker's experience as consulting physician to the Poughkeepsie Insane Asylum were given. It seemed that the consulting board had been in a measnre a failure. It had found the medical officers unable to give histories of many of the cases. The recorded histories were, in large part, valueless. Careful and scientific examinations of the patients were not made. The consulting physicians consequently had few data to give them on which to base an opinion. Neither was their advice sought upon points where it should be.

The speaker made the point that consulting boards should not be boards of inspection for several reasons: thus, a medical inspection of asylums to be useful should be made at unexpected times, even at inconvenient hours, and the inspector should go about the asylum alone, free to look into every corner and ask questions of everybody. Almost inevitably, he said, the members of a medical consulting board feel a professional sympathy with resident medical officers, and also feel a pride in the good reputation of the asylum. These are faults inseparable from local association and neighborly bias. A lunacy commissioner or State inspector, with no special reason for favoring any one asylum, would be much more likely to make searching visits and to pen truthful, unsparing reports. While Dr. Seguin would reserve for a consulting medical staff the right to point out any existing evil and to make any suggestions for the welfare of patients, he was adverse to its acting as an inspecting board. The functions of a consulting medical staff to a lunatic asylum should be as nearly as possible like the duties of a consulting physician in general medical practice.

In a subsequent discussion, Dr. Putnam-Jacobi confirmed Dr. Seguin's views.

Dr. J. C. Shaw's paper, entitled

"TWO YEARS' EXPERIENCE WITH NON-RESTRAINT IN AN ASYLUM CONTAINING EIGHT HUNDRED PATIENTS,"

was interesting on account of its showing, by further experience, that non-restraint could be successfully employed in this country, even under adverse circumstances. The speaker related several instances in which, by perseverance and ingenuity, some most intractable cases had been made manageable. Transference to another ward was often a successful measure.

In the discussion at the close of the reading of the papers, Drs. Putnam-Jacobi, Beard, Morton, Parrish, and others took part.

A resolution was passed authorizing the council to secure all legislative help possible to promote the interests of the insane and a knowledge of insanity.

The council, by vote, appointed a committee to confer with the National Board of Health, and endeavor to secure its help in collecting all possible statistics and other information regarding the condition of the insane of the United States. Drs. Seguin, Dana, and Parrish were appointed on this committee.

Mr. H. N. Moseley, M.A., F.R.S., has been elected professor of physiology at Oxford.

Correspondence.

STATE EXAMINATIONS AND LEGAL QUALIFICATIONS.

To the Editor of The Medical Record.

Dear Sir: In my note of November 5th (which was intended by me to be private, but was not so understood by you, see Record of December 17th), I did not intend to find fault with so wise and virtuous a body as the Legislature of Pennsylvania in its efforts to protect the people against incompetent practitioners. The fact that it legislates in the electric effulgence of its own record is sufficient to place any act it may pass out of the reach of criticism; and again, if I had known (as was my duty) that Section 4 of the Pennsylvania Act is an *almost* exact reproduction of one of the sections of the New York Medical Act of 1880, I could not have certified my own insanity by questioning either its constitutionality or its propriety. When the Empire undergirds the Keystone, the Mississippi Valley may open its mouth to wonder, but not to speak—as the photographer said when he had focussed the corpse: "You may wink, but you must not speak."

The question is as to whether a law ignoring medical schools of other States by giving to home colleges the unrestricted and irresponsible right to subject all comers to an examination, and, in effect, to confer all degrees by making a diploma of no significance until indorsed by order of the faculty of a college doing business in the State, is in harmony with our institutions. "The object of medical legislation in any given State is to provide that none but competent men shall practise there" (very good); and to "provide" that no competent man shall be subjected to unnecessary expense or annoyance, or exposed to the danger of being totally discredited by corporate organizations having a selfish, rather than (or as well as) a professional interest to subserve. It almost seems as if to put the question of competence in the hands of medical faculties who have mercenary interests to be nurtured by discrediting competing schools and their graduates, is to "discriminate against citizens" and institutions of other States.

It is undoubtedly right that the "local authorities" should be satisfied as to a man's qualifications before they permit him to engage in the practice of medicine; but if self-interest or corporate rapacity may be thrown into the scale when the question of competence is to be weighed, how much value may the local authorities attach to the indorsement of the native institution over that which may inhere in the certificate of the foreign faculty. To prejudge incompetence is not much better, perhaps, than to assume competence when certified by honorable "foreigners," if there may be any such.

If Pennsylvania and New York legislators are consumed by a patriotic desire to protect their people against unqualified practitioners, why not take the whole question out of the hands of the college faculties, who have several reasons for graduating a candidate aside from his qualifications, and put it in the hands of men who have no money interest in pushing anybody through, who have no prospective profits to blur their sight, who know nothing of the candidate until he presents himself for examination, and who only care that the profession should be learned and honorable, and that the people should be protected. I know of an institution which, for fifteen years, has annually put its candidates for graduation into the hands of a board of eminent men from more than one State, who had no other connection with the college and no unprofessional interest in it, who were present at the examinations and balloted on each candidate, and no degree was conferred over their heads. It was not a mere formal affair, for there was a loss of from five to twelve per cent. of the applicants. I am unable to say how common a similar method may be among the great institutions of the East, but inquiry has convinced me that the percentage of loss is not so great in some other institutions.

No doubt men can be found, in almost any State, outside the college faculties, competent to sit in judgment on the pretensions of an unfledged doctor without thrusting him, in his defenceless infancy, into a nest whose maternal instincts are concentrated and spent on the native brood. Let the State take the whole matter in its own hands and settle, by a competent and disinterested board of examiners, who shall be allowed to practise medicine within its bounds—the citizen may as well be maltreated by a foreigner as by a native, the loss to the State is the same in either case. When Pennsylvania or New York, or any other State for that matter, brings into existence such a board of examiners, responsible to the people, responsible to the profession, responsible to their own unblinded consciences, no doubt Ohio colleges will smilingly forward their quota of candidates with a comfortable confidence that they will not discredit their teachers, and that they will fare as well as they deserve, if not as well as the more eastern product. Such a board would sit in judgment on the work of medical teachers, native as well as "foreign," and the legislature would then have a means of determining "whether the colleges within the State graduate competent men" or not, in order that it might intelligently "revoke their charters" if necessary.

The law seems to be set on two boneless legs: 1st, that the home institutions do not and cannot graduate incompetent men; 2d, that "foreign" institutions do not and cannot graduate any other kind. Of course the colleges *may* put a liberal construction on the law, but institutional pride and ambition, as well as money interests, plead in the opposite direction.

You say "it is simply a question of protection to the people against the influx of so-called graduates which, until of late, flourished in Pennsylvania, and against institutions *nearly as bad*, which *we believe* are still in operation in Ohio." I submit that you must have a substantial foundation for this belief, which, expressed in this dubious and indefinite way, casts a share of discredit on all Ohio colleges; and if you have any basis, you wrong the profession of the State and of the nation by not making your charges squarely and above board. The profession of Ohio is anxious to conserve its honorable respectability, and you will confer a favor if you will be much more explicit than you are when you say "we believe," etc. The Record is national, perhaps more than that, and these are little tidbits which may be eagerly devoured on the seaboard, but will not be relished at all a few hundred miles inland, and will only bring American medicine into undeserved contempt with foreigners.

Yours very respectfully,

T. Clarke Milne.

Massillon, O., December 23, 1881.

[Our correspondent has evidently been a good

student of THE RECORD in the past, as his principal plea seems to be in favor of an independent examining board for all comers—a plan, it will be remembered, that has frequently been advocated in the editorial columns of this journal. The remarks concerning the existence of diploma-selling colleges in Ohio were based on statements contained in the medical journals of that State. We would be glad to learn that they are unfounded.—ED.]

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 15, 1882, *to January* 21, 1882.

GARDNER, WM. H., Capt. and Asst. Surgeon. Now at St. Augustine, Fla., to proceed to San Antonio, Texas, and report in person to the Commanding General, Department of Texas, for assignment to duty. S. O. 14, A. G. O., January 19, 1882.

LA GARDE, L. A., 1st Lieut. and Asst. Surgeon. Granted leave of absence for one month, to take effect on arrival of Asst. Surgeon Collins, at Cantonment on the North Fork of the Canadian River, Indian Territory. S. O. 12, Department of the Missouri, January 16, 1882.

BIRMINGHAM, H. P., 1st Lieut. and Asst. Surgeon, who returned to Fort Leavenworth, Kansas, on 12th instant, from leave of absence, to proceed to Fort Gibson, Indian Territory, and report to the commanding officer for duty, relieving Asst. Surgeon Collins. S. O. 12, C. S., Department of the Missouri.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 21, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 14, 1882.	0	10	278	3	202	128	31	0
Jan. 21, 1882.	0	17	303	8	210	137	40	0

MORTALITY IN THIS CITY LAST YEAR.—The number of deaths in this city last year was 38,324, of which 7,102 occurred in hospitals and other institutions.

SUBCUTANEOUS NERVE-STRETCHING. Billroth treats sciatica by subcutaneous nerve-stretching. The patient is placed flat upon his back, the leg is extended, and then the thigh flexed strongly upon the trunk. This puts the sciatic nerve upon the stretch.

NEW YORK AND PHILADELPHIA CLINICAL LECTURES (adapted from the *Denver Tribune* "Primer").—Who do I see? You see a lecturer describing a case to his class. Do you see the case or the class? Of course you do not, they are both in the lecturer's mind.—*St. Louis Clinical Record.*

A VERY SIMPLE BACK-REST is described by Mr. T. R. Fendrick in the *British Medical Journal.* It consists of an ordinary roller-towel which is over the patient's head and adjusted to the back. The other end is then fastened to a bed-post. In this way the patient is comfortably supported, while the upper part of the towel will hold a luncheon tray very nicely.

THE CONDITION OF MRS. LINCOLN.—In a report of Mrs. Lincoln's physical condition, which has been signed by Drs. M. Clymer, Sayre, Knapp, and Pancoast, it is stated that "she is suffering from chronic myelitis the result of a fall, from dropsy, which is caused by Bright's disease of the kidneys, and from two cataracts on her eyes. She is truly in a deplorable condition."

CARBONIC ACID AS A POISONOUS PRODUCT OF DIGESTION.—According to Dr. I. Munk, of Berlin, a horse of average weight excretes over three drachms of carbonic acid, or its near allies, in twenty-four hours. This acid is developed as one of the final products of digestive change in the intestinal canal. He suggests that it may, at times, be the cause of death of horses in cases of colic.

THE PERCENTAGE OF CURE OF INSANITY in England and Wales last year was forty. The mortality rate was nine per cent.

SMALL-POX DECLARED EPIDEMIC IN THE UNITED STATES.—The Executive Committee of the National Board of Health, at its meeting, January 20th, declared small-pox to be epidemic in the United States. An order was made directing an inspection of several of the most important quarantine stations in the country in order to determine if the rules and regulations of the Board, approved by the President, November 14, 1881, are being properly enforced. An appropriation of $2,000 was made for the purpose of preventing the introduction of the disease in the District of Columbia.

THE INFANT ASYLUM CLOSED BY THE HEALTH BOARD is situated in Clinton Place, and is not the New York Infant Asylum, as might otherwise be inferred.

DR. L. C. GRAY'S REPLY TO DR. N. M. SHAFFER is crowded out of the present issue.

DR. KENNETH REID, of this city, died on Sunday of acute pericarditis.

BOVINE VIRUS.—An unprecedented amount of bovine virus has been sold by dealers, and the demand is increasing.

DIABETES AND MALARIA. — M. Verneuil recently presented to the Académie de Médecine the reports of six cases of diabetes following malaria. He believed that malaria frequently causes diabetes, which may be in two forms: an acute and temporary one, and a chronic form coming on some time after the malarial attack.

VIVISECTION received a most powerful defence in the December number of the *Nineteenth Century.* Sir James Paget, Dr. Wilkes, and Professor Owen argue for liberty in scientific research. The absurdity of the English law is well illustrated by a statement of Sir James Paget. He says: "I may pay a rat-catcher to destroy all the rats in my house with any poison he pleases, but I may not myself, unless with a license from the Home Secretary, poison them with snake-poison."

THE SATURDAY AND SUNDAY HOSPITAL FUND for the present year had amounted, up to January 23d, to $38,884.66. It is expected that $50,000 will be raised before the books are closed.

Original Lectures.

BUFFON AND BONNET IN THE EIGHTEENTH CENTURY.[1]

By JOHN C. DALTON, M.D.,
NEW YORK.

Lecture II.

Mr. President and Gentlemen: I shall ask your attention in this evening's lecture to two remarkable phases of physiological doctrine which once held a conspicuous place in the world of science, namely, Buffon's theory of Organic Molecules, and Bonnet's theory of the Inclusion of Germs. Notwithstanding that both are now so obsolete that perhaps the majority of my hearers will hardly recall their meaning, they were formerly considered of sufficient importance to be test questions in the controversies of the period, and they are fair examples of the fluctuating estimate to which such subjects are liable at different times.

It sometimes happens that in searching the annals of medicine we find allusions to systems and theories which have so far gone out of vogue that we know them only by name. They are no longer part of our scientific doctrines, and they have so little present value or significance, that we seldom spend the time even to weigh their merits or defects. And yet these systems once had their day. They were prominent topics of discussion and interest, and they divided medical opinion between the views of antagonistic parties, or carried with them the scientific world in a temporary enthusiasm of acceptance and admiration. They were often originated by men of learning and ability, and owed much of their success to the superior talent of their authors. They were usually ambitious in design and seductive to the imagination. They claimed to open a wider field of knowledge, and to unlock the secrets of nature by some new formula that should dispense with the older and slower methods of plodding investigation. So long as they held out this prospect they stimulated the hopes and attracted the interest of all; but after a time it appeared that the anticipations which they excited were not fulfilled, and that their promised results failed of realization. Then the theories themselves began to lose in importance, and, once started on the downward road, they receded more and more rapidly from view, until they finally passed out of sight and out of mind. They vanished into the limbo of departed spirits, and if they ever show themselves at the present day, it is only to gratify a momentary curiosity as the relics of thought and opinion in former times. Like unsubstantial shadows, they flit across the pages of a forgotten literature, and the glimpses that we catch of them here and there are the only traces of their existence in the history of the past.

One of these phantoms, alive and flourishing a hundred years ago, was Buffon's theory of *Organic Molecules.*

Buffon was a remarkable instance of a man of splendid but temporary reputation. His ability commanded the attention of his contemporaries, and enlisted their interest and co-operation for natural history as no modern writer had done before. His immediate successors were fond of comparing him with Aristotle and Pliny; and, if we take their estimate of his reputation, there have been few men, either in science or literature, who ever acquired so great a popular renown. He was a member of the French Academy, of the Academy of Sciences, of the Royal Societies of London and Edinburgh, and of the Academies of Berlin and Bologna. He was created a count by Louis XV., and was for forty years Superintendent of the Garden of Plants, which he more than doubled in extent, and where his statue was erected while he was yet alive. His great work on natural history was received as an authority from the date of its publication; most of the European potentates sent him specimens for his museum or complimentary messages; strangers from abroad thought it a privilege to see him; and among the visitors at his country-house were Thomas Jefferson and the Prince of Prussia.

Notwithstanding this extraordinary success, Buffon's qualities could not secure a lasting reputation. He excited the enthusiasm of his readers by his eloquence and originality, but he did not give them much real instruction. This deficiency was felt even by his friends. Vicq d'Azyr, who pronounced his eulogy in the French Academy, and who calls him "one of the lights of the age, and an ornament to his country," says that he often "compels admiration, without convincing the judgment." According to Moreau, he "supplemented, by the brilliancy of his imagination, the imperfections of his knowledge," and showed himself "more remarkable for boldness of conception than for precision of ideas." There can be no doubt that he did much, in his own time, to popularize natural history among the educated and influential classes, but it was rather as an intellectual entertainment than a scientific pursuit, and his works are now nearly destitute of value for any purposes of reference or exact information.

It appears that Buffon's style as a writer was one of his principal charms for the readers of that day, and formed a large element in his success. It had a sort of poetic splendor that would be thought quite inadmissible at present in a scientific work, and sometimes will hardly bear translation without a close approach to puerility; but at the period when he wrote, and in his hands, it magnified his subject, and made an impression upon his readers. He often adopts this lofty tone at the opening of a chapter, and nearly always employs it for descriptive passages. He introduces the horse as "this proud and impetuous animal, the noblest conquest ever made by man, his companion in the fatigues of war and in the glory of combats." The elephant, he says, "makes the earth tremble beneath his footstep, uproots trees from the soil, and with one thrust of his body will batter down a wall." Buffon took great pains to cultivate and perfect this style. They say he would often repeat certain passages aloud, or get his friends to do so, with himself for an audience, to enjoy the sound of his swelling sentences, and perhaps make some improvement in their construction. One of the extracts which he was especially fond of hearing in this way was his delineation of the feelings of the first man, when just awakened to consciousness and vitality. The newly created being is supposed to be telling his own story, as follows:[2]

[1] Being the Second Course of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons, New York. Lecture II. was delivered in New York, January 31, 1882.

[2] Œuvres Complètes de Buffon. 2me edition. Paris, 1819. Tom. x., p. 358.

"I well remember that instant of mingled joy and anxiety, when I felt for the first time my extraordinary existence. I knew not what I was, where I was, nor whence I came. I opened my eyes. What an overflow of sensation! The daylight, the celestial vault, the green earth, the crystal transparency of the waters, all attracted me, excited me, and gave me an inexpressible sense of enjoyment."

And so on, for seven or eight consecutive pages. Another favorite passage was his picture of an Arabian desert, introduced apropos of the natural history of the camel.[3]

"Imagine," he says, "a region without verdure or moisture, a blazing sun, the sky always arid, plains of sand, and mountains still more parched, where the eye searches in vain for any trace of a living creature; a land lifeless and, as it were, stripped by the winds, where nothing is to be seen but dead bones, scattered pebbles, and rocks standing or overturned; a barren desert where the traveller never finds a shady resting-place, where he has no companionship, nor anything to remind him of life in nature; absolute solitude, a thousand times more frightful than that of the forest, since even trees are living beings for the man who is there alone. In these void and measureless regions, more isolated, denuded and desolate than any other, the empty space seems to enclose him like a tomb. The light of day, more gloomy than the shades of night, only serves to disclose his helplessness and destitution. It shows him the horror of his situation by enlarging before his eyes the boundaries of vacancy, and shuts him out from the habitable world by stretching around him an abyss of immensity which he can never hope to cross."

The satisfaction which Buffon felt in these descriptions does not seem to have been diminished in any way by the fact that he had never seen an Arabian desert, and that his story of the first man was entirely imaginary.

"Buffon's Natural History" was a work of very extensive design. It included an explanation of the structure and physical geography of the globe, the nature of man and animals, a general view of animals, vegetables, and minerals, the functions of nutrition and reproduction, an account of the varieties of the human race, and the different species of birds and quadrupeds, with a description of specimens in the Royal Museum.

He had a theory of the planetary system, which was one of his favorite doctrines, and which occupies the greater part of his first volume. He believed that the planets were originally a part of the solar sphere, from which they had been struck off at some time by the shock of a comet in collision with the sun.[4] The materials of different densities, propelled under this impulse with different velocities, he supposed would naturally collect into masses at corresponding distances from their starting-point, and so give rise to a series of planets, moving in successive orbits. Their axial rotation was accounted for by the obliquity with which the comet struck the sun, and the consequent twirling motion imparted to its detached portions.

Wild as this hypothesis sounds when stated by itself, it was advocated by its author with much force and ingenuity. Even mathematics came in for a share in its support, and it was fortified with arguments from the doctrine of probabilities. As all the planets move round the sun from west to east, and nearly in the same plane, they must all have been set in motion, according to Buffon, at the same time and by a single impulse. Otherwise the chances would be as sixty-four to one that the six planets then known would not all move in the same direction, and as 7,962,624 to one that all their orbits would not be within seven and one-half degrees of the same plane. He extended the calculation still further—to the size, distance, and density of the different planets, and to the relation in each between its density and the rapidity of its orbital motion. The figures did not all come out exactly right, but in the case of Jupiter and Saturn the theoretical and actual proportions were very nearly alike; and the author observes with much satisfaction that "we cannot often obtain, in matters of pure conjecture, so close an approximation to reality as this."

But the most remarkable production of Buffon's genius was his system of organic molecules, with its associated theories of nutrition and reproduction. According to this view, the bodies of all living creatures, animal and vegetable, were composed of minute particles, differing in kind and configuration, but all possessing the general character of vital endowment. These were the organic molecules; as we call a compound group of hydrogen and oxygen atoms a molecule of water, or one of carbon, hydrogen and oxygen a starch or glucose molecule, so Buffon seems to have imagined a still more complex molecule, having the properties of organic life. These molecules, when associated in the form of an organized body, gave to each part its specific character, and thus provided for the physiological activity of the whole. But they were themselves indestructible, and contained in their own substance the essential principle of vitality. When the animal or plant died and was decomposed, its organic molecules were at once ready to assume new combinations. When one animal fed upon another, or an animal upon a plant, the organic molecules of the creature used as food passed into the tissues of that which devoured it; and when an animal, in decomposing, enriched the soil and fed vegetation, its organic molecules were absorbed into the structure of the growing plant. Thus these molecules represented the living elements of the material world. Their quantity was never either increased or diminished. They only passed from one form of combination to another, always transferring their activity from the old organisms to the new. Consequently there was no such thing as destruction of life in nature, but only continual changes in its distribution. The organic molecules were an exhaustless reservoir of vitality, from which all living beings took their origin, and into which they all again returned.

But nutrition and generation require something more than the mere existence of organic molecules. For, even supposing these vitalized particles to be present in full abundance and variety, how could they be arranged in proper order within the plant or animal, so as to form its different organs or enable it to reproduce its like? This want was supplied by Buffon's celebrated idea of *interior moulds*. It is not easy to say exactly what he meant by this expression, except that it was something capable of arresting the molecules and placing them in a certain combination. "In the same way," he says, "that we have moulds for giving to the outside of

[3] Œuvres Complètes, tom. xv., p. 336.
[4] Ibid., tom. i., p. 151.

[5] This was in 1750, when Saturn was supposed to be the outermost planet of the solar system. If the author had included in his calculations Uranus and Neptune, he might have made the chances in favor of his theory as 4,586,471,424 to one.

things any form we choose, suppose that nature can produce moulds which will determine not only the external configuration, but also the internal structure of bodies formed in them."

Most readers will perhaps say that this definition of interior moulds is only an analogy, and does not include any intelligible idea of their construction. Buffon himself seems partly conscious of this, and makes a rather labored and metaphysical defence of the term, to show that there is nothing in it contradictory. However that may be, the "interior mould" is something which belongs to the entire body, and also to each of its separate parts. The whole body is a mould which determines the position and arrangement of its different organs. Each organ and each part of an organ, when supplied with organic molecules from the food, selects those which are like its own, and rejects the rest; while it arranges the incoming molecules in proper order, and incorporates them with its substance, still preserving its original form and texture. In this way the body is nourished, and grows, not by addition to its exterior, but by the intimate penetration and intussusception of appropriate molecules throughout its mass, and all by means of its "interior moulds."

The mysterious phenomena of reproduction were fully explained by the aid of organic molecules and interior moulds. This explanation was even the simplest in cases which we usually consider the most wonderful; as where plants, worms, or polyps reproduce and multiply, without sexual generation, by division or budding. Suppose, in a polyp, the organic molecules to be arranged throughout in the form of minute polyps, just as a cube of salt may be made up of an indefinite number of smaller cubes; then any part of such an organism, when separated from the rest, will reproduce an entire polyp, because it already contains the whole of it in miniature. Something similar takes place in animals or plants which multiply by budding. In them the organic molecules absorbed with the food are distributed in due proportion until every part has received its full supply. After that the surplus molecules are sent back from the different organs, and collected in some particular locality, where they form a composite mass, representing the materials of the whole body. Such a mass is a bud, and, when separated from its stock and placed where it can absorb nourishment for itself, it of course grows into an organism like its parent, because it is composed of the same kind of molecules, arranged in the same order and in the same proportions.

In sexual generation, like that of man and the higher animals, the process is more complicated. Here, again, every part of the body absorbs the organic molecules appropriate to itself, and moulds them into the substance of its own texture. But the excess of material not required for the nourishment of the organs and returned from them as superfluous, appears in the form of a liquid, and is deposited in a special reservoir. This liquid, made up of contributions from every part of the body, is the seminal fluid. It is a mingled organic extract of the entire frame, and thus contains all the materials necessary for reproduction. Its place of deposit is in the testicles and vesiculæ seminales.

The extreme activity of this seminal fluid, the concentrated essence of the animal organism, is proved by the formation of the spermatic animalcules. According to Buffon, these are not original or essential ingredients of the seminal fluid, but a product of its restless vitality, an incidental form in which its generative power is exhibited.[6] They represent the first assemblage of its organic molecules, as combined into moving particles large enough to be visible by the microscope.

But the female also produces a seminal fluid, in the same manner and with the same general qualities as the male. Both fluids, male and female, contain all the elements common to either sex. The only difference between them is that, each fluid being a special extract of the body from which it comes, that of the male contains molecules representing the male organs, that of the female those representing the female organs. Buffon entirely rejects the doctrine that viviparous females produce by means of eggs. For him, the ovaries are testicles; the Graafian follicles are reservoirs of nutritious lymph; and the corpora lutea are glandular structures, which produce the female seminal fluid by a process of filtration.[7]

Thus Buffon accounts for reproduction in a very simple manner. Generation is only, in a higher degree, the act of nutrition, operating with the surplus of nutritive material. A mixture of the male and female seminal fluids contains all the organic elements of both sexes, and therefore represents the species. In the cavity of the uterus it finds its appropriate nidus and nourishment, and grows into a perfect organism like that from which it came. The theory was supported by abundance of proof, for it explained to a charm most of the important phenomena of generation. 1st. During infancy and childhood there is no power of reproduction, because all the organic molecules are taken up by the growing tissues; it is only after puberty, when the body has acquired its full growth, that there is a surplus of organic material, to be filtered through the testicles in the form of seminal fluid. 2d. The young child or animal usually resembles both its parents, because its substance is derived from both the male and female seminal fluids. 3d. Creatures of small size, like insects, mice, and guinea-pigs, have a numerous progeny, because the demands of nutrition are easily satisfied, and there is a large superfluity left for reproduction; but those of greater bulk, such as man, the horse, the elephant, produce only a single young one at a time, and at long intervals, since the nourishment of their own bodies takes up most of the organic molecules of the food. All these facts were plainly in accordance with the new system.

Indeed, the only difficulty about Buffon's theory (if it is not a contradiction to say so) was that it made the matter too easy. If the seminal fluid of the male contains all the organic molecules necessary to make an embryo, why does it not make one? Why should not the male be self-producing, and why should not the female, on the other hand, have a progeny of little females, from her own seminal fluid, without the necessity of impregnation by the male? According to the theory of organic molecules, every adult animal produces a fluid capable of generating young. But in point of fact, the female must also receive the fluid of the male; and, without the concourse of the other, each sex remains barren.

This is the great difficulty in Buffon's way, and to do him justice, he does not try to conceal or evade it, but struggles with it manfully for sixteen octavo pages. The reader almost feels a sympathy for him

[6] Œuvres Complètes, tom. ix., p. 335.
[7] Ibid., p. 345.

when his system of reproduction, after running so smoothly everywhere else, is arrested by so bulky an obstacle as the fact of sexuality. His explanation is full of ingenious hypotheses; but it is very complicated, and leaves in the chain of evidence so many gaps and contradictory possibilities that it is hardly worth while to remember it. Nevertheless, the author thinks too well of the system to have his faith in it shaken by one or two imperfections. The main part of it, he says, he has "proved by so many facts and arguments, that to doubt it is hardly possible." He does not doubt it himself; and he avows that he "entertains no uncertainty whatever as to the basis of the theory, after careful scrutiny of its principles and the most vigorous estimate of its consequences and details."

Buffon's system has its widest extension and most splendid success in the dim regions of equivocal and spontaneous generation. His organic molecules are the genuine repositories of life; the interior moulds of particular organisms being only the means of arranging them in special forms. And when, by the death of an animal and the decomposition of its body, its organic molecules are released from the constraint of their interior moulds, they are set at liberty, living and active as ever, to be disseminated in any direction where chance may carry them. In this condition they are the universal seed of nature, without any character of specific organization, but containing all the prolific force of the bodies from which they came. After a time they are absorbed by some other mould, animal, or vegetable, into which they transport their own indestructible qualities of nutrition and life. But during the interim, after leaving the old organism and before their incorporation into the new, they form, by their reunion, a multitude of living structures which do not belong to any of the ordinary or recognized species in nature. Such are the moving corpuscles of the seminal fluid, the microscopic fungi and infusorial animalcules of organic solutions, and, in their larger varieties, the eels of starch-paste and vinegar, and even earth-worms, mushrooms, and entozoa. All these creatures come by spontaneous generation. They are the connecting-link in nature between the simple organic molecule, on the one hand, and the complete animal or plant on the other. This exuberant force of production is always in activity. Notwithstanding the death of any number of existing creatures, the total quantity of life on the globe cannot be diminished even for a moment; for it continues uninterrupted in the organic molecules, which pass and repass from the animal to the vegetable, and from the vegetable to the animal, or produce in the interval an endless variety of spontaneous generations.

No doubt, Buffon was in love with his system, and admired it for its own sake. Still, he had a fair share of what Condorcet calls the "sentiment of his own superiority," and ends one of his chapters in a strain that sounds, at this day, rather exalted. "I will add nothing more," he says, "to these reflections. To be accepted, or even to be comprehended, they require a profound acquaintance with nature, and complete freedom from prejudice; so that for the majority of my readers, a longer explanation would be insufficient, and for those who can understand me it would be superfluous."

When Buffon's work appeared, it attracted at once the curiosity and applause of the public. The reviewers praised it as "an honor to both the age and the nation."[8] Hume said that its author "gave to things no human eye had seen a probability almost equivalent to proof;" and Needham declared that his investigations on the seminal fluid would be a subject of admiration "for centuries to come." All his readers, however, were not of that opinion. There were some who did not accept the doctrines of the book, and who feared that its popularity might have a bad effect. Buffon's high position, his magnificent style, and his confident tone of assertion, alarmed his adversaries, and made them dread his influence on the public mind. His theory, they said, was "filled with dazzling paradoxes, as disastrous to the principles of science as the mines of a skilful engineer to the solid ramparts of a fort." This difference led to a warm discussion. The Abbé de Lignac wrote an anonymous treatise against Buffon's work, under the title of "Letters to an American,"[9] where he criticised the system of moulds and molecules, and said that, instead of describing natural objects, it contained only "the philosophical dreams of M. de Buffon." Buffon's friends, on the other hand, denounced the "American Letters" as a lampoon. They accused de Lignac of having written it out of envy, and to punish Buffon for not showing more respect to his friend Réaumur. Deslandes called the book an imposture, because it was entitled "Letters to an American," when it had not been written, in the form of letters, to anybody; and because the title-page bore the imprint of Hambourg, though it was really printed at Paris. "That makes no difference," replied de Lignac; "the only title-page that can be called an imposture is one that promises something the book does not contain; like a natural history, for instance, made up of disjointed and extravagant systems, without anything natural about them."

Buffon's critics were especially dissatisfied with the organic molecules of the seminal fluid, and their wonderful capacity for producing an embryo. "If these molecules," they said, "are indifferently the elements of a plant, a man, a dog, or a polyp, how can they combine to make either? We might as well go back to Epicurus and his atoms." One of them was asked, by an admirer of Buffon, which he would rather be, the author of the "Histoire Naturelle," or that of the "Lettres Américaines." He replied that he would rather be an organic molecule, because then he would have more intelligence than either of them. Buffon held his own against these attacks without making any direct reply. His literary talent alone was almost enough to secure him the victory; and if his opponents denied the truth of his theory, they generally had nothing better to offer in its place.

The only investigations at that time which seriously threatened Buffon's system were those of Haller on fecundation and development. They first appeared in 1753, four years after Buffon's first publication. Haller had examined the ovaries of sheep both before and after impregnation, and observed the condition of the Graafian follicles and corpora lutea. Since corpora lutea, according to Buffon, were glands for producing a seminal fluid, they must, of course, be formed before impregnation, and could only open to discharge their fluid at the time of conception. Haller declared that there were no corpora lutea in the ovaries during the period of heat, nor immediately after conception, at

[8] Journal des Savans. Paris, Octobre, 1749.

[9] Lettres à un Américquain, sur l'Histoire Naturelle de M. de Buffon. A Hambourg, 1751.

which time there was nothing to be seen but a simple orifice leading into a ruptured follicle. The glandular structure of the corpus luteum was only formed some days afterward, and therefore could not have furnished anything essential to conception.[10] We now know the accuracy of these observations by Haller, and can hardly understand how those of Buffon should have been so preposterously incorrect. But at that time it was difficult to decide between them. Both were men of high scientific position, and the system of organic molecules was too promising and seductive to be surrendered at the first attack.

But as time went on, it began to suffer from its own defects. After thirty or forty years' trial, its promises had not produced anything, its obscurities had not been cleared up, and the organic molecules were still as hypothetical as ever. One of Buffon's tenets for explaining reproduction by division, was that the simpler organisms, like plants and polyps, were composed of particles in the form of their own miniature; and he had argued at great length that this kind of structure, if we only thought so, was as simple as any other. Malesherbes[11] finally concluded that it would be of no use to think so, because the thing was impossible. "To be convinced of this," he says, "let any one try to draw a picture of this pretended polyp, entirely made up of similar polyps; or let him get a quantity of little wooden or ivory figures in the form of polyps, and then see whether he can put them together in any way so as to make an entire polyp of the same shape. I defy him to do so."

Buffon's interior moulds had no better luck in the end. When it came down to genuine matter of fact, no amount of verbiage could make it plain what sort of things they were, nor how they operated. Malesherbes declared that the very idea of a mould is that of something which acts by its surfaces, and that consequently the hypothesis of interior moulds is a mere metaphysical subtlety, without any real application. "To make use of interior moulds, therefore, for explaining the process of nutrition or development, is to solve one difficulty by another; it accounts for one thing by the supposition of a second no more intelligible than the first. The truth is, it does not really give any explanation at all; it only answers, like the doctor in Molière: *Opium facit dormire quia habet facultatem dormitivam.*"

Another cause of decline for Buffon's system, toward the end of the last century, was the progress of opinion in regard to spontaneous generation. At that time there was much investigation on this subject, especially as to the infusorial animalcules. Needham and Spallanzani were the principal disputants in this field, and attracted to it, for some years, the attention of the scientific world; the result being, at last, a general conviction that Spallanzani's experiments had destroyed the hypothesis of spontaneous generation, at least for the infusoria. Buffon's system, therefore, diminished in importance, because this mysterious department of reproduction, which it had explained so well, no longer needed explanation. It thus lost one of its strongest claims to support; and, without being actually disproved, it was discredited to an extent which must have seriously impaired its scientific status.

Finally, it received its death-blow in 1827, from De Baer's discovery of the ovulo in the ovarian follicle of mammalians.[12]

De Graaf had supposed, when he first described the ovarian follicles, one hundred and fifty years before, that they were really eggs, and this view was widely accepted. The ovaries of mammalians, like those of fishes and birds, were regarded as clusters of eggs held together by intervening tissue. But it was not easy to demonstrate in man and quadrupeds the discharge of these supposed eggs from the ovary. No observer had ever succeeded in finding one of them separated from its ovarian connections; and the earliest ovum discoverable, in the uterus or Fallopian tube, was, of course, considerably smaller than the ripe follicle in the ovary. This threw a doubt over the doctrine of De Graaf, and left room for Buffon's assertion that there were no such things as eggs in the mammalian female; that her so-called ovaries were testicles, as much so as those of the male; and that she produced a seminal fluid composed of organic molecules similar to his.

This view was so interwoven with Buffon's whole system that one could hardly exist without the other. And when the microscopic ovum and its mode of exit from the ovary were at last fully brought to light, so that any one could see them when he chose, the discussion naturally came to an end. The female testicles and seminal fluid, with their glandular corpora lutea, no longer had a place in court; everything connected with them shared in the collapse, and the entire company of organic molecules, reproductive extracts, composite organisms, and interior moulds, disappeared together, like actors at the end of a play.

Another set of ideas, once in high repute, but now long obsolete, are those of Bonnet on the "Inclusion of Germs."

Bonnet was of a wealthy and influential family in Geneva, where he passed the whole of his life, engaged in the study of natural history and kindred subjects. He became widely known for his attainments in this direction, and was connected with nearly all the learned societies of Europe. He was the friend and correspondent of Réaumur, Haller, Spallanzani, Trembley, and De Saussure. Spallanzani communicated to him in manuscript, for perusal and advice, his own researches on the generation of infusoria, and when the volume appeared, he printed, as part of it, Bonnet's letters in reply.[13]

The personal character of Bonnet had traits of superior excellence, and secured him a large share of attachment and esteem. His disinterestedness and modesty, in regard to his own opinions, were well known and were often the subject of eulogy. His own discoveries in entomology were of acknowledged merit; but he attributed them mainly to the teaching of Réaumur, because he had been inspired by the example and encouragement of this master, under whom he felt "proud to enrol himself as a pupil." Spallanzani calls him the "Philosopher of Geneva," and the "sublime author of the 'Contemplation of Nature.'" His first publications appeared in 1745, and were followed by others at various dates until 1770, after which they were collected in a series of eighteen volumes.[14]

Bonnet presented the curious spectacle of a man

[10] Histoire de l'Académie Royale des Sciences, p. 134. Année 1753.
[11] Observations sur l'Histoire Naturelle de Buffon. Paris, 1798.

[12] K. E. von Baer: De Ovi mammalium et hominis genesi. Lipsiæ, 1827.
[13] Spallanzani: Opuscoli di fisica animale et vegetabile.
[14] Ch. Bonnet: Œuvres d'Histoire Naturelle et de Philosophie. Neuchatel, 1779.

under the varying influence of two opposite tendencies—at one time an exact and painstaking observer of nature, at another an irresponsible wanderer in the vaguest of speculations. His earliest scientific work was an experimental investigation on the reproduction of aphides, by which he first demonstrated with certainty the non-sexual viviparous propagation of the insects.[15] It is hardly possible to imagine a more thorough, direct, and conscientious method than that adopted by Bonnet in these observations. He took the young aphis just expelled from the body of its parent, placed it upon a sprig of fresh leaves, stuck in a pot of earth and covered with a bell-glass, and then watched his solitary prisoner for twenty-one days, until it had grown to maturity and had produced, without fecundation, ninety-five young ones. During this time he kept exact records of the insect's moulting, and also of the new births, most of which took place under his own eye. He repeated the trial with aphides of different species, and with those which had themselves been produced in captivity; and he succeeded in raising them in this way, without fecundation, for eight successive generations. For these observations he received the honor of an election as Correspondent of the French Academy of Sciences. He also made valuable contributions to natural history on the multiplication of aquatic worms by division, on the growth of plants, on the function of leaves, and on the habits of insects.

On the other hand, he constructed, out of his own meditations, a graduated system of things visible and invisible, which he called the "Scale of Being," and which formed the subject of one of his later works, published under the title of "Contemplation de la Nature." It embraced the structure of the entire universe, from the simple elements of inorganic matter to the "celestial hierarchies" of other worlds. According to this system, there are no gaps or sudden variations in nature, but only a continuous series of combinations and modifications in ascending grade. Everything is immediately connected with that which precedes, and with that which is to follow. At the beginning of the volume there is inserted, for the reader's convenience, a printed table, exhibiting the regular succession of natural objects, from gaseous substances up to man. The purely inorganic elements, in various grades of combination, lead to the composite earths, sulphurs and metallic bodies; thence through the vitriols or metallic salts, to ordinary saline substances in crystalline form; and thence to compound rocks of heterogeneous structure, like granite and sandstones. Immediately above these are rocks like slate, talc, and asbestos, which exhibit a laminated or fibrous texture, and which may therefore be considered as "the connecting-link between inorganic and organic solid bodies."

This point is especially important in Bonnet's scheme, for it marks the passage from dead matter to living organisms. It is not altogether what its author could wish; but he makes the best of it by quietly putting its burden of proof on posterity. "It must be acknowledged," he says, "that the transition here is not quite so perfect as in many other cases. It looks as though nature in this instance had made a leap. But the gap will undoubtedly be filled up as our knowledge increases in precision and extent."

Once fairly started among organized structures, the scale rises easily through corals, lichens, and mushrooms, to plants in general; through the sensitive plant to animals, from insects to snails, serpents, eels, and fish; through flying-fish to birds, from birds to bats and quadrupeds, and so on, to monkeys, apes, and man. But this extended gradation is not enough for Bonnet. He has also the "Celestial Hierarchies" and the "Gradation of the Worlds;" some of which, he believes, are as superior in physical and moral organization to our earth as man is above the ape.

The frontispiece to Bonnet's work is an engraved portrait of himself, taken, as he tells us, when he was "plunged in deep meditation on the restitution and perfectibility of living creatures." It renders, he thinks, his "reflective expression" with much success; and it is certainly fortunate that the artist saw him just when he happened to be meditating on so abstruse a subject.

Bonnet's great theory of reproduction, or the "Inclusion of Germs," appears mainly in his work entitled, "Considérations sur les Corps Organisés," with some additional amplifications in the "Contemplation de la Nature." His thoughts were turned in this direction partly by Trembley's recent discovery of the multiplication of fresh-water polyps by division, and partly by his own observations on the reproduction of aquatic worms and aphides. He was further strengthened in his opinion by Haller's observations, which appeared in 1758, on the formation of the chick in the fowl's egg.

There were, about that time, three different views entertained as to the nature of sexual generation:

First.—The spermatic animalcules, one or more in number, were arrested in the uterus and there became developed into embryos. According to this view, the male parent furnished the living germ, the female only providing for its care and nourishment.

Second.—The seminal fluids of both sexes, when mingled together, produced the embryo, *de novo*, by a mutual arrangement of their organic particles. This was the doctrine of Buffon, and attributed an equal and similar action to both parents.

Third.—The germ pre-existed in the ovary and egg of the female, and was only stimulated to further development by the seminal fluid of the male.

Bonnet accepted the third of these doctrines. He believed in the pre-existence of germs, but he gave to the idea a much wider extent and significance. The germ, as he understood it, was not only a structure capable of being developed into a living creature, it actually contained, within itself and ready formed, all the parts of the future organism. These parts were exceedingly minute, delicate, and transparent; but they nevertheless existed, though as yet imperceptible to the senses. It was only their small size, their softness, and transparency, which prevented their being seen. After impregnation, they grew larger, more consistent, and more opaque, and then first became recognizable as the organs of the embryo. These organs, accordingly, were not things of new formation. They only showed plainly, at a certain period of development, what had previously existed in invisible form. The author extended this doctrine without hesitation to its farthest limits. For him, every seed contains a plant in miniature. In an animal germ, every organ and tissue, without exception, is already present: the heart, the vessels, the liver, the kidneys, the intestine, the nerves, and the brain, consequently there is no such thing as generation, if by that we understand the production of a new being, or even of a

[15] Œuvres de Bonnet, tom. i., p. 19.

new organ. What appears to be such is only the development of something that was in existence beforehand.

These views were adopted by some, and rejected by others, the physiological theorizers of the day dividing into two parties, known as the *epigenesists* and the *evolutionists*. The epigenesists were those who believed, like Buffon, that the embryo was a new formation, produced by the union of molecules and the successive organization of different parts. The evolutionists,[16] on the other hand, maintained with Bonnet the pre-existence of germs, and insisted that nothing in the embryo was newly formed, but only enlarged and solidified by development.

These notions were sustained in some degree by the discoveries of Haller in the incubation of the fowl's egg. Haller had studied the development of the chick, day by day, and had noted the appearance of its different organs and envelopes. His masterly observations on the yolk-sac, and its connection with the embryo, were claimed by the evolutionists to be decisive as to the pre-existence of the germ and its essential parts. "The membrane enclosing the yolk," says Bonnet, "is continuous with the intestine of the chick. The arteries and veins of the yolk are branches of the mesenteric vessels of the fœtus. The blood circulating in the yolk-vessels receives its impulse from the fetal heart. The yolk is, therefore, essentially a part of the chick. But the yolk exists in the egg before impregnation; consequently the chick also exists in the egg before impregnation. . . . This proves incontestably that the embryo is at first a part of the parent, and that its existence is anterior to the time of conception.

Bonnet's assumption of the pre-existence of the embryo, as well as of the germ, was not without a certain plausibility. The organs of the embryo, when first formed, are, in fact, not only small, but also colorless and transparent; so that they are seen with considerable difficulty, and may even be overlooked for some time after they are really present. Bonnet says this is the mistake made by the epigenesists. "They estimate the time when the parts of an animal are first created by that at which they first become visible; and whatever cannot be seen they assume has no existence." But the organs in an imperfect embryo might very easily have been there, though not sufficiently distinct to meet the eye. "Do you wish," he says, "a short and ready demonstration of this? When the lung of an embryo chick is first perceptible to the senses, it already measures ten one-hundredths of an inch. It is evident that it would have been visible when only half that size, were it not for the extreme transparency of its tissue."

And so on of all the other parts. Bonnet has more faith than the epigenesists. He believes that the organs of the embryo were there before he could see them, and that they even existed from the beginning, though invisible in the unimpregnated egg.

But if the germ contains all the organs of the chick, ready formed, only small and undeveloped, it contains ovaries as well as the rest, and these ovaries contain the germs of the next generation. It is plain the series cannot end here. The germs of the second generation are chicks in miniature as much as those of the first. Consequently, they contain their own ovaries and germs, which, in turn, contain others still; and so on without any definable limit, one set of germs within the other in geometrical progression, each germ containing not only its own embryo, but also all the embryos that can possibly be produced from it in unnumbered generations hereafter.

Bonnet does not shrink from the magnitude of this spectacle. He rather glories in it, and enjoys the contemplation of its unlimited perspective. "For my part," he says, "I like to extend, as far as possible, the limits of creation. There is a pleasure in the thought of this magnificent series of organized beings, enclosed, like so many little worlds, one within the other. I see them receding by degrees, diminishing in regular order, and losing themselves at last in an impenetrable night. It gives me a sense of satisfaction, when I look at an acorn, to see in it the germ of a majestic oak that centuries hence will shelter the birds and the beasts under its branches; or, still more, to behold, in Emilia's womb, the germ of the hero who thousands of years hereafter will found an empire; or perhaps of the philosopher who shall discover to mankind the cause of gravitation, the mystery of reproduction, or the mechanism of our existence."[17]

This prospect, however, for the germs of the future, which Bonnet found so attractive, was not as satisfactory to some of his contemporaries. They even haggled with him about the past. If the age of the world, as generally admitted, was six thousand years, and if each generation of man is completed in thirty years' time, that would give two hundred successive generations since Adam and Eve, with about a thousand million human beings at present on the earth. All these inconceivable numbers must have been contained, under the form of germs, in the ovaries of Eve. The minuteness of the embryos of the two hundredth generation, when enclosed in the body of our first parent, was declared to be something incredible. Still more so, for plants which grow and fructify every year. Hartsœker calculated that the relation in size between the first wheat-grain, and that to be produced at the end of six thousand years, would be expressed by the figure of unity, *followed by thirty thousand zeros*.

All this did not give Bonnet or his friends any discomfort. Such terrific estimates may serve to confound the imagination, but logic always finds a sure refuge in the infinite or indefinite devisability of matter. Hartsœker and his followers, according to Bonnet, put the senses and the imagination in place of the understanding. They want to see and touch, so to speak, what can only be comprehended by an effort of the mind. The hypothesis of the inclusion of germs is above the level of such calculations, and is, he concludes, a "splendid triumph of pure reason over the senses."

Bonnet's theory is by no means confined to the simple hypothesis of one germ included within another. It is an extensive and elaborate system, ramifying into all departments of natural history and physiology. The included germs not only exist before fecundation, but they are nourished and grow, in a way analogous to that of adult bodies. There can be no doubt of this, because the fowl's eggs certainly increase in volume before fecundation, and are to be seen in the ovary, of many different sizes and grades. But the yolk is essentially a part of the young chick. Therefore, if the yolk grows

[16] It is unnecessary to say that this term was used, during the last century, in a sense entirely different from that which attaches to it now.

[17] Œuvres de Bonnet, tom. v., p. 206.

before fecundation, the embryo does also. Besides, in the theory of inclusion, the contained germs diminish progressively, one within the other, to an inconceivable minuteness. The outermost germ is, of course, the largest, and is nearly ready for impregnation. But when it has been fecundated, and has expanded into the body of an adult female, the next included set of germs have in turn come to be as large as the other was before; and so on, in continuous order, the smaller germs gradually moving up in the scale of magnitude, to be ready for impregnation when their time arrives. The process of nutrition and growth must therefore be going on in these embryonic organisms, and has been going on in them ever since the creation.

But how is the nutrition of the germs provided for, and what are the materials used in their growth?

It is well known, says Bonnet, that the different parts of the body are not nourished directly by the blood. A more delicate and colorless fluid, called *lymph*, separated from the blood by appropriate organs, serves for the immediate supply of the tissues. And as these tissues vary in fineness and consistency, we can hardly doubt that the secretory organs prepare for them different kinds of lymph, more or less attenuated to correspond with the delicacy of structure in separate parts. Some tissues, as, for example, the brain and nerves, must require a lymph many times finer and more subtle than that employed for the grosser parts.

But the included germs are made up of tissues finer still. If we admit that there is no such thing as real generation, and that everything has been preformed from the beginning, then the germs which are to make their appearance a thousand years hence have now actually within them, and incalculably minute, all the parts characteristic of the species. Imagine the heart, the brain, the nerves, and the stomach of such an embryo. Certainly, no lymph could penetrate their tissues, or be of the least use for their nutrition. What fluid is there in the body sufficiently attenuated and ethereal to insinuate its particles into a structure of such delicacy, and incorporate them with its substance? There is only one, and Bonnet secures it. This precious and double-distilled material, which is alone capable of nourishing an unfecundated germ, is the NERVOUS FLUID.

The nervous fluid was not an invention of Bonnet's. It was generally acknowledged, in his time, as the immediate cause of nervous action. Like the electric fluid, it was intangible and invisible, and was known only by its effects. Its invisibility was due to its vaporous or aërial constitution, and this enabled it to circulate in the delicate passages of the nervous tissue, which were themselves invisible, owing to their minuteness. The nervous fluid, or "animal spirits," so called, after being elaborated in the brain, was disseminated through the nervous channels to the various organs of sense and motion. Its existence was proved by a very simple fact. If you tie a nerve going to a muscle, the muscle is paralyzed. How could a ligature cut off the nervous influence, except by arresting the passage of a fluid? There was, therefore, little or no doubt in regard to it.

The nervous fluid, in Bonnet's system, was not entirely dissipated in the exercise of sensibility and muscular action. The unconsumed portion, after returning to the brain, was again sent out by similar channels to be used in nutrition. It was carried by the maternal nerves to the ovaries, and there immediately distributed to the germs "of the first order," or those nearest maturity.[18] Elaborated anew and still further spiritualized by the organs of this delicate structure, it supplied a finer nourishment to the germs of the second order; here it underwent a similar preparation for those of the third order; and so on, to the belated and unfortunate germ which "would not be ready for fecundation till the end of the world."

This staggering array of infinitesimals, in structure and function, only serves to increase the author's admiration and strengthen his confidence. "What an abyss of wonders," he says, "in the human brain. Even a single fibre of the brain is itself an abyss. What shall we say, then, if all these mysteries, existing in the adult body, are repeated and concentrated in so many organized atoms, enclosed one within the other, and growing constantly smaller in indefinite progression?"

The act of impregnation, in reproduction by sexes, comes in for a very easy and natural explanation. The nervous fluid is the appropriate nourishment for an unfecundated germ. When this germ becomes a fœtus it will be supplied with lymph, and its organs will grow like those of the adult. But how can it make the transition from one state to the other, and how are the finely woven tissues of the germ-embryo to be made capable of admitting the grosser substance of the lymph? This is exactly the function of the seminal fluid. It is not only a source of nourishment for the mature germ, but it has a special stimulating influence on the embryonic heart. The pulsation of the heart in the germ-embryo is very faint, and only serves for the circulation of the nervous fluid. Consequently the unfecundated germ increases but slowly, and never gets beyond a certain stage of development. But when the seminal fluid comes in contact with it and penetrates its substance, the heart's pulsation is increased in force. This causes an expansion of the circulatory channels, an increased volume of the circulating fluid, and consequently more rapid nourishment; and thus the limit is passed between the condition of the germ-embryo, whose tissues only admit nervous fluid, and that of the growing fœtus, that can thrive upon the lymph. Once begun, the process naturally continues until the body has attained its full development.

Still the theory of inclusion was not altogether free from difficulty. One of its most troublesome problems was that of intestinal worms and other parasites. Bonnet wrote a special treatise on the tænia, partly devoted to different theories of its origin. He rejects, of course, the idea of equivocal or spontaneous generation. But if, like everything else, it comes from pre-existing germs, are these germs introduced into the intestine from without, or did they exist beforehand in the embryonic human body itself? If so, the germ of the first tape-worm and, in fact, of all which have existed since, must have been included in the body of the first man. There are objections to be met in either case, but the most singular are those connected with the second.

In this view, the tænia has a contemporaneous origin with man; that is, it already existed in Adam, and so has passed into his posterity. But, according to Genesis, the animals were all created before Adam. Therefore the tænia must have first lived in a foreign element; but the fact is, we never find it

[18] Œuvres de Bonnet, tom. x., p. 10.

except in the intestines. Besides, how can we suppose such a pest to have been placed in the body of our innocent progenitor, living in the earthly paradise of the Garden of Eden? Valisnieri, who adopted the contemporaneous theory, had an odd answer to this objection. He assumed that before Adam's fall the intestinal worms did not do him any harm, but, on the contrary, were rather useful, in "consuming the superfluous humors and gently stimulating the intestinal walls." Bonnet thinks this explanation a trifle far-fetched, and doubts whether Adam, in his state of innocence, had any superfluous humors, or needed any tape-worm to excite his intestines. He prefers the idea of M. Leclerc, that the intestinal worms, which are now so troublesome, only existed at first in Adam under the form of eggs, and were not hatched until after his disobedience.[19]

But the line of descent for tape-worms is not yet quite clear. Granting that they existed in Adam, either as eggs or as worms, how did they get into the body of Eve, through which they must have passed, for transmission to posterity? The most direct route from the intestine, according to Valisnieri, would be through the thoracic duct, which "mounts upward along the ribs" to that one which was taken for the body of Eve. Bonnet is inclined to adopt a simpler and less miraculous method of transfer, by supposing that the eggs of the tænia are so small that they can pass through the blood-vessels, and thus reach the vesiculæ seminales. "In this way," he says, with a puzzling kind of naïveté, "we can explain the whole thing without much difficulty, and *without having recourse to divine power*."

However, the author regarded the introduction of parasitic germs from without as, on the whole, the more probable theory of their origin, especially as the weight of evidence was already in that direction.

The system of Bonnet has applications to many different points of general physiology, such as the resemblance of the young animal to both parents, the production of hybrids and monstrosities, and in particular to non-sexual generation, or multiplication by budding and division: all of which it explained with more or less ingenuity and success. It had an apparent support in several recent and important observations; such as the existence in certain seeds of an embryo plant, the multiplication by interior germs of *Volvox globator*, the reproduction of aphides without impregnation, and Haller's researches on the embryo chick. Haller himself defended it from a variety of objections, and adduced a number of arguments in its favor.[20] But the theory itself went so far beyond the limits of possible demonstration that its basis of reality bore no calculable proportion to its towering superstructure. It discounted the results of embryological discovery at too exorbitant a rate; and it could not afford to have any of them turn out differently from what was expected. This happened in the case of the mammalian egg. Subsequent observations, made with better facilities, showed that the organs of the fœtus do not pre-exist in the ovum in the sense imagined by Bonnet. The impregnated ovum has, it is true, a remarkable property, by which each separate part assumes afterward a definite shape, and becomes a distinct organ. But the actual configuration of these organs is certainly not present in the ovum, because we can now see its original structure, as well as the intermediate forms which are to be replaced by those of the future embryo. The system of the inclusion of germs, in the time of its glory, embraced the whole history of the world from beginning to end, and the mechanism of growth and reproduction throughout organic nature, and enlisted in its behalf the discoveries of scientific research as well as the results of logical deduction. But it came to grief when the study of embryology had reached a certain stage in its development, by demonstrating the actual constitution of the mammalian egg.

[19] Œuvres de Bonnet. tom. iii., p. 140.

[20] Haller: Elementa Physiologiæ Corporis Humani. tom. viii., sect. ii., art. xxix. 1766.

Original Communications.

EXOSTOSES OF THE POPLITEAL REGION.*

By THOMAS M. MARKOE, M.D.,
NEW YORK.

The subject which I have to bring before the Surgical Society to-night, is not one which presents any features of novelty, and, perhaps, none of any great interest or importance in itself. I have ventured to present it because it deals with cases not common enough to be familiar to the busy practitioner, and yet occurring sufficiently often to fall in the way of a very moderate surgical experience. I ask your attention to the exostoses which grow from the posterior and lateral surfaces of the lower end of the femur and the upper end of the tibia, and which, therefore, may be said to belong topographically to the popliteal region. I have thought that, by grouping these cases together, I might help a little toward an easy recognition of a disease which, in the books, is treated of only under those general considerations which belong to many growths, in whatever part of the skeleton they may be situated. I shall relate very briefly the history of three cases of this form of tumor, as preliminary to what I have to say about the disease itself.

Case I.—Henry F. W——, seventeen years of age, was admitted into the Roosevelt Hospital, December 10, 1877, with a hard lump on the inner and lower side of the popliteal space on the right side, which he said he had discovered about four years previously, when it was extremely small. It slowly and steadily increased during the past three years, but during the last year, and particularly during the last six months, it has been increasing at a much more rapid rate. A firm, hard tumor was found projecting from the posterior and inner surface of the head of the tibia, about two inches below its articular extremity. It seemed to be nearly the size of the closed fist, and occupied and filled all the lower and inner portion of the popliteal space. The surface was smooth, but presented a number of knobs and irregularities which could be distinctly felt through the integuments. It was painless on pressure, and perfectly unyielding to any amount of force. It had already gained such a size as to interfere with complete flexion of the leg, particularly in walking. Pulsation good in all the arteries below. No œdema. There could be but little ground for hesitation as to the diagnosis of exostosis, but the knobbed and irregular surface suggested a predominance of cartilage.

The operation for its removal was performed De-

* Read before the New York Surgical Society, December 13, 1881.

cember 13, 1877. A long, longitudinal incision was made over the centre of the tumor, and exposed a free, serous-looking, shining surface, evidently cartilaginous, and from all the exposed faces the tissues could be separated with the greatest facility. In fact, it seemed as if there was no connection whatever with the surrounding tissues over the largest part of the surface of the tumor, except by a few fine, glistening, white fibres, which passed loosely from one to the other. The tumor was traversed by a few healthy muscular fibres, which were easily slipped aside over the smooth surface. Some few deeper muscular layers were divided to give more easy access to the point of origin of the growth. The artery was found skirting the base of the tumor on its outer side, pushed somewhat from its normal course, and some care was necessary in order to avoid it. The base of attachment was found to be comparatively small, the mass of the tumor overhanging it nearly equally on all sides. A chain-saw was passed round this narrow pedicle, and the mass removed. From the deep situation of the pedicle at the point where it sprang from the bone, the chain-saw could not be worked parallel with the surface of the tibia, and, accordingly, it sawed its way out obliquely, leaving the pedicle still quite prominent from the bone. With some considerable difficulty, owing to its depth from the surface, this prominence was removed by chisel and gouge, and then it could be seen that the point of outgrowth of the tumor from the bone did not occupy a space of more than about a square inch. The operation was done under full Lister precautions. Some suppuration followed, and rather a slow healing by granulation, but no important accident happened during the cure, which was completed, and the patient discharged from the hospital, February 2, 1878.

Case II.—The second case was one which occurred in private practice, and is the more valuable, because I have been able to keep watch of the case during the three years which have elapsed since the tumor was removed. Mrs. R——, thirty-eight years of age, of fine physical development, and generally in very good health, had first been conscious of a lump in the popliteal space at about the age of eighteen, which, during the twenty years of its existence, increased from the size of a hen's egg to the dimensions of a man's fist, and at the time of her coming under my care was still growing. The increase was very slow until about seven years ago, since which time it has grown more rapidly. The patient being of an anxious and extremely sensitive nature, her disease has been a constant source of trouble to her during these later years, not so much from actual pain in the tumor itself, as from neuralgic pains in various parts of the limb, aggravated, and, indeed, frequently induced, by the blows and pressures to which, in spite of her watchful care, the growth was often accidentally subjected. At times such injuries gave rise to a certain amount of inflammatory swelling, lasting for several days. On one occasion a vein was supposed to have been ruptured, for very great ecchymosis and œdematous swelling supervened somewhat suddenly, which only slowly subsided, leaving the whole limb much enfeebled. She has been able, when not suffering from those injuries, to walk tolerably well, though not without a limp and some dragging of the diseased limb, but of late, owing to the increase of the growth in an upward direction, the flexion of the knee-joint has been more and more restricted, and threatens soon to be entirely prevented. There is habitual œdema of the limb below the knee.

Examination shows a large, hard, irregularly shaped tumor, springing from the tibia on its posterior face, and presenting nearly in the middle of the popliteal space, which it almost completely fills. It appears to be a good deal larger than a man's closed fist, and has an acuminated prolongation extending upward, and encroaching upon the posterior aspect of the knee-joint. This last seems to be the point of most active growth. The whole tumor, and this part of it particularly, gives the uneven knobbed feel characteristic of its cartilaginous surface. The operation was performed May 1, 1878. It perhaps should be mentioned that she had allowed the operation to be deferred so long, because she had been told that it could never be removed without danger to both limb and life, and she had been cautioned by several, who she says were excellent surgeons, not to allow it to be interfered with in any way.

The steps of the operation were similar to those described in Case No. I. A longer incision was made, and the surface of the tumor exposed as before. The growth proved to be nearly twice as large as in the first case, and gave us more trouble in using the chain-saw. A large piece, however, was taken off by the saw, and this gave access to the rest of the pedicle, which, with the remaining mass of the tumor, was removed by gouge and chisel down to the level of the sound bone. The surface of attachment, though the tumor was so much larger, was about the same in extent as in the previous case, covering in a rounded outline about one square inch.

The operation was done under full Lister, with spray and all other precautions, but, unfortunately, we were at this time experimenting with thymol, and this was the antiseptic used. As happened in so many other cases in which we relied upon this remedy, it failed to protect my patient against the ordinary inflammatory complications to which such wounds are always liable. Deep suppuration occurred, happily not spreading to the thigh, and phlebitis and thrombosis of the popliteal and femoral veins very seriously complicated and delayed the healing of the wound. The final result, however, was a perfect cicatrix, but not till after several weeks of suffering and tedious delay. The limb had been so long crippled, and she had been so long accustomed to favor it, that it was not till many weeks had elapsed that she could fully flex the knee, or use the limb with any confidence or comfort. By steady and courageous perseverance in passive motion and in active exercise, however, she at last regained the free and perfect movement of the joint, and she has now so far recovered the use of the limb that she is able to walk without the slightest limp, and she scarcely recognizes any difference in the movement, strength, or endurance of the once crippled limb. The phlebitis did not extend beyond the femoral vein, but tenderness was slow in subsiding, and it left behind a tendency to œdema which only gradually disappeared.

Case III.—W. D——, aged twenty-two, came into the New York Hospital, October 7, 1881. He had a hard, prominent growth on the outer aspect of the right femur, just above the knee-joint. He said the swelling had been increasing painlessly for about four years. It was manifestly smaller than either of the two preceding cases, and, being situated on the outer margin of the popliteal space, had developed at right angles to the surface of the bone from which

it grew, and was, therefore, not strictly in that space. The history, with the hard, immovable, knobbed feel of the tumor, left no doubt as to the diagnosis, and the operation for its removal was performed on the 12th, five days after his admission. This operation was more tedious and difficult than either of the previous ones, by reason of the strong and very tense bands of fascia lata which here combine with the tendinous origins of the vastus externus, and which encircled the neck of the tumor with a ring of resistant fibrous tissue, which very greatly impeded access to the pedicle by which it was supported. Besides this, the pedicle was extremely short, so that the deep surface of the tumor approached very nearly the surface of the bone from which it grew. In consequence of these conditions, it was impossible to use the chain-saw, and even with the chisel the tense bands of fascia lata interfered with the handle being sufficiently depressed to bring the cutting edge fairly against the pedicle. After much difficulty, and the dividing of some deep tendinous bands, the base was reached and the growth separated. The surface of attachment was less than an inch square, and was smoothed, as nearly as was practicable, to a level with the surrounding surface. So much disturbance of the surrounding tissues had taken place in the operation, that quite a pocket had been formed down toward the popliteal space, and across this a through drainage-tube was passed by a counter-opening made near the outer border of the biceps muscle. The wound was dressed lightly with gauze dipped in a solution of carbolic acid (1–40). Some inflammation followed the operation, and the cavity of the wound suppurated. Inflammation seemed at one time disposed to travel up the cellular planes of the thigh, but this tendency was arrested before any serious addition was made to the suppurating surface, and then granulation became healthy and vigorous. He was discharged from the hospital, cured, November 11, 1881.

By far the best general account of these growths that I have been able to find, is contained in a paper by Mr. Astley Cooper, published in a volume of memoirs, written by himself and Mr. Travers, on various surgical topics, and published in 1818. He says: "The most frequent seat of the periosteal exostosis is on the inner side of the os femoris, just above the internal condyle. I have also seen it seated on the tibia, immediately under the insertion of the sartorius and gracilis muscles." He gives several carefully described cases, and one in particular which has a sort of historic interest, for he says, in concluding the history and treatment of the case in Guy's Hospital: "She was the first person upon whom I performed any operation in that institution." In this paper, Mr. Cooper gives an account, with a drawing, of a saw invented by a Mr. Machell, who must have been the Luer of his day, and Mr. Cooper invited him to use his saw on one of his cases, which he did, as is stated, very satisfactorily. It was a complicated affair, and, to my eye, not well fitted for this sort of deep-sawing.

The pathology of these cases is extremely simple, consisting in an outgrowth of bone, perfectly normal in its microscopic and macroscopic features; abnormal only in its excess. The growing bone is deposited in a cartilaginous matrix which thinly encrusts its surface, and, so far as I know, never exists at any other point. It is thus sharply defined from enchondroma, the ossification, which is often found in long and old enchondromata, being irregularly disseminated through the tumor mass, and never presenting the gross appearances and orderly construction of the true exostosis. In the exostosis proper, the whole process is one of orderly and perfect ossification, and the result is a growth which not only presents under the microscope the normal elements of bone, but in its arrangement into compact and cancellous tissues, follows absolutely the normal type of development. The thin layer of cartilage which is found on its surface, is only in quantity sufficient to act as the nidus in which the bone-development is to take place, and even the most rapidly growing portions of the tumor will be found to possess a bone-foundation, with a covering of cartilage only a little thicker than that on the older parts of the growth. Authors state that these tumors are always pedunculated, and that, once formed, they grow by extension of the body of the tumor, without any increase of the base from which it springs. This Mr. Stanley very strongly insists on; and it certainly distinguishes these tumors from enchondromata, where such limitation of base is not found. Mr. Queckett has also noticed that in the ossifying enchondroma there are found many distinct points of ossification; whereas, in the true exostosis there is but one. Something quite similar in perfection of structure is found in the exostoses which spring from the surface of the shaft of the long bones at the point where strong tendinous or aponeurotic insertions exist. These growths, though similar in structure, differ from the true exostosis in many respects. Two of the chief points of difference are found in the fact that these tendinous growths are never pedunculated, and that they have at no time a cartilaginous matrix, the bone-substance being deposited directly in the fibrous structure which is involved.

It has been contended that the true exostosis sometimes is arrested in its growth after it reaches a certain size, and remains unchanged for an indefinite period. Of course, I cannot deny the possibility of such an arrest, but from the steady increase of all the cases I have seen, and similar regular increase being noted in almost every published case I have read, I cannot help feeling that cases in which arrest takes place are probably those of tendinous variety and not of the true exostosis.

The surface of these tumors, smooth, shining, and cartilaginous, is very loosely attached to the surrounding tissues—so loosely, that the slight bands or fibres of connective tissue are easily broken up by the finger. Where the tendons and muscles play over its most superficial surface, there are found well-developed bursæ lined by a shining serous membrane, and permitting the freest possible gliding motion of the parts upon one another. In each of my cases, this superficial bursa has been well-marked, and in the last case reported I took pains to discover its extent with my finger, and also with a probe introduced into its cavity. I found it to occupy all the free surface of the growth, except some spaces on the sides where the new-formed synovial sac descended only to varying distances toward the neck. It was, however, not a perfectly free serous cavity, for at several points it was crossed by fine threads of connective tissue, more abundant at some points than at others, but at all points so loose and slender, that if the cavity had been injected with fluid, the surfaces would nowhere have been held in contact by them. The deeper synovial bursæ could not be so fully examined, but it seems probable that they are merely enlargements of the

normal serous-lined sheaths belonging to the tendons of the region. In the cases I have presented, these deeper bursæ have not been interfered with, being pulled aside from the deeper surfaces of the tumor with the tendons to which they belonged. I think by a careful operator they would never be opened.

The question of interest which arises with regard to these synovial cavities is: Do they communicate with the adjacent joint? On this point I have been able to find little or no clinical evidence. Virchow, Corriel, and Ranvier, the writer in the "Nouveau Dictionnaire," and some of the English writers, allude to the existence of these bursæ, and speak of their occasionally communicating with the joint as a source of danger. None of them give any cases in which mischief has arisen from such communication, and none of them make any distinction between original normal bursæ, and those of new formation. None of the anatomical authorities pretend to assert that any of these normal bursæ do always communicate with the synovial cavity, nor even to indicate precisely which ones do thus communicate. With regard to the bursæ of new formation, I believe that they never do communicate with the joint; a belief which I cannot justify by any demonstration, but one which their mode of formation, and the analogy of new-formed bursæ in other situations, makes so probable, that, in the absence of any proof to the contrary, I am willing to accept it as a fact. The practical point lies here. The normal bursæ have firm, well-defined walls, and though perhaps somewhat extended from increased pressure and friction, they are simply displaced by the neck of the tumor, which they skirt sometimes very closely, but always near the surface of the bone from which the tumor has grown. Thus lying, they are out of the way of the external incisions, and in the deeper dissections can always, I believe, be pushed out of the way and avoided by closely hugging the neck of the tumor, and that part of the adjacent bone which may be necessarily exposed. If this be true, then all danger from joint involvement disappears, and neither through the superficial bursæ, which must be opened, nor from the deeper ones, which ought not to be opened, have we anything to fear.

With regard to the treatment of these exostoses, the first question which presents itself is, whether they should be interfered with at all. If they are small, not rapidly growing, and giving rise to but trifling inconvenience, I think they should not be meddled with. In the ordinary case, however, where the increasing size of the tumor brings constantly increasing discomfort, there seems to be no good reason for postponing its removal.

The first step in the operation is a free incision to expose the tumor. This incision must be made free to allow access to the pedicle, and should, if possible, be made in reference to drainage. This first incision opens the bursa on the surface of the tumor, and a very little force turns aside the surrounding tissue till we reach near the base of the pedicle. Here we encounter the strong tendinous and aponeurotic bands which represent the fibrous structures attached to the bone in the situation of the tumor, and which are pushed aside by its encroachment. From the tension of these structures, muscular as well as tendinous, they render the deeper manipulations difficult. Two things are to be borne in mind in dealing with them: 1st, to avoid unnecessary violence, and, 2d, to avoid opening the normal bursæ which are here situated. It seems almost impossible to avoid altogether the bruising and tearing of these strong and unyielding structures, and this arises partly from the difficulty we have in pushing them back so as to expose the base of the pedicle, and partly to the necessity of bringing the instrument we use for cutting the bone to act at right angles to the base of the growth, and on the same plane as the normal surface of the bone from which it springs. Applying, for example, the edge of the chisel to the base of the pedicle, at the point where it springs from the bone, we have the handle of the chisel held at an oblique angle with the bone-surface, to which it ought to be parallel; and every attempt to depress the handle, so as to bring the line of section where it should be, acts with powerful lever-force on the resisting tendinous bands, and of necessity bruises and often lacerates them. This violence is doubtless the explanation of the fact that the wounds left after these operations rarely heal by primary union, and are extremely liable to extensive and spreading suppuration. Mr. Stanley says: "Where an exostosis is covered by muscle, the fibres should be divided transversely, because the retraction of these will facilitate the exposure of the tumor; also because suppuration is almost sure to occur at the bottom of the wound, and the retraction of the cut edge of the muscle will facilitate the discharge of the matter and prevent the evil of its burrowing among the surrounding parts." He still further says: "After the removal of an exostosis, especially when deep-seated, it is not expedient to approximate the divided edges of the integument, in the view of obtaining their adhesion; since, in the exposure and removal of the tumor, so much injury is usually done to the surrounding cellular tissue, that suppuration through it will almost necessarily ensue." This injury to the deep-seated fibrous structures is unquestionably the chief danger we have to guard against, and with the ordinary straight chisel I do not see how it can be entirely avoided. In view of this mechanical difficulty, I have had some chisels made, which I think will, at least to a degree, enable us to avoid its worst consequences. These chisels are of two forms, which will be adapted to different cases, their efficiency depending upon how much the tumor overlaps its base, and how near its lower surface comes to the surface of bone from which it springs. The idea of these chisels is to change the line of their cutting action from one oblique to the surface, to one which shall represent a tangent to that surface, without the necessity of depressing the handles so as to make injurious pressure. Of course, in using these chisels, it is to be borne in mind that we only require to cut through the outer compact lamina at each point of application of the chisel, and that the neck should thus be cut through on all sides before any attempt is made to remove it. When, however, the compact lamina is thus cut completely round the base, the cancellous tissue yields readily, and the mass is easily separated. One other danger, I think, may be avoided by the use of these chisels, and that is the splitting of the bone on which the tumor grows, an accident which I conceive would be much more likely to occur from a chisel driven obliquely down into a bone, than it would where the chisel-cut merely grazes its surface.*

The treatment of the wound after the operation

* I have said nothing about the use of the chain-saw, but my experience with it disposes me to abandon it altogether.

demands a word. I have in each of my cases operated under full antiseptic precautions, and in the two first cases the wound was closed with drainage-tube and full Lister dressing. None of my wounds, however, have healed by primary union; suppuration has always occurred, and in one case phlebitis, and in the other deep cellular inflammation took place. These accidents have happily proved slight, and their consequences have been mere delay in the healing of the wound, but much of this happy issue I am disposed to attribute to careful antiseptic management. Under the old regime, I can recall several cases where the inflammatory accidents were much more serious, and one in particular I remember, where Dr. John Watson removed an exostosis of moderate size from the lower and outer part of the femur with fatal consequences. Several writers report fatal cases.

With regard to recurrence after removal, the exostoses are classed among the most benign of new growths. Mr. Stanley thinks it very important to remove every portion of the morbid growth. He says, "If but the smallest portion of the exterior of the exostosis, with its cartilaginous capsule, be left, reproduction of the tumor will be, at the least, not an improbable occurrence." Of this belief, however, he does not advance a single fact in corroboration, and I have found none in the authors I have consulted. It has been noticed, however, that, in exostosis of the great toe, a partial removal does not prevent a continuance of the growth, and this analogy seems fairly to strengthen Mr. Stanley's views. Of my own cases, I have had an opportunity of watching but one, the subject of Case II. She has no symptom of the reappearance of the growth—now three and one-half years since the removal of the tumor.

December 12, 1881.

MEDICAL INDUCTION COILS.

By LUCIUS E. FELTON, M.D.,

POTSDAM, N. Y.

A COMPLETE induction coil consists of a coil, a battery-cell, a vibrator, and a current-regulator. A coil is generally made up of a bundle of soft iron wires, called a core, surrounded by one or more coils of insulated copper wire. If a current of electricity be sent through the primary wire, a part of it is stored up in the core as magnetism, and remains there until the battery circuit is broken, when it is again transformed into a current of electricity in the surrounding coils, if they form a circuit. This current has the power of overcoming several hundred times the resistance that the battery current has, depending upon its electro-motive force.

Electro-motive force is the exciting cause which sets up tension; it is located at the point or points where energy takes the form of electricity—in the galvanic cell, at the surface of the zinc plate; in the induction coil, in the convolutions forming the coil, each convolution having its own electro-motive force, so that the electro-motive force of a coil is in direct ratio with the number of turns of wire, without regard to its size. The smaller the wire the greater number of turns in a given length of coil

The electro-motive force of the coil varies as the number of turns of wire; the electro-motive force of each turn varies as the amount of energy from which it is derived, and that is the energy stored up in the core as magnetism.

The amount of magnetism induced in the core depends upon the quantity of current flowing through the primary or battery wire, and upon the number of turns of this wire. The battery current depends upon the electro-motive force of the cell, its internal resistance, and the resistance of the primary wire. The cell which gives the greatest electro-motive force is the bichromate: the elements are zinc and carbon, and the battery fluid a solution of bichromate of potash and sulphuric acid.

The electro-motive force of this cell is a trifle over two voltaics, and the internal resistance very much less than any other cell, being less than half an ohm. Hence it is best fitted for a portable battery, as a small cell may be used without materially increasing the resistance. There are, however, some decided disadvantages in the form usually employed—the Grenet. The carbon plates are attached to a brass connection within the cell; the fluid very soon finds its way between them and oxidizes the brass, and breaks the circuit, and the current ceases. The same trouble occurs where the rod is screwed into the zinc plate, and also at the joint in the rod. Another disadvantage, the zinc plate is carried in the cell and is subject to the action of the fluid when carried. The plate being seldom cleaned and amalgamated, becomes coated with chrome alum, and produces an unsteady current.

I have devised a cell which overcomes all of these objections. The cell or jar, *a* (Fig. 1), is hard rubber, all sides permanently closed when vulcanized. The negative element is a rod of carbon three-fourths of an inch in diameter, into one end of which is

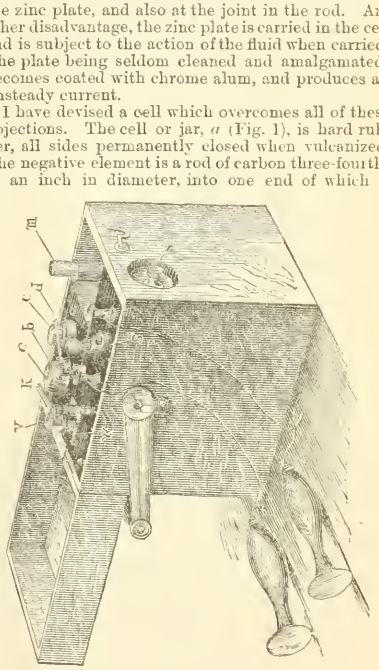


FIG 1.

soldered a short piece of metal, *e*, for better contact. Upon this end is fitted a hard rubber ferrule, *b*, secured by rubber cement so perfectly that no fluid can find its way through. The end of the ferrule is closed by a hard rubber disc, having a hole for *e*, secured in same manner. Upon lower end of ferrule is a screw fitted to a hole in one end of cell *a*, and screwed in with cement. The carbon reaches nearly to bottom of cell, while end with ferrule projects

outside, as shown in Fig. 1. A hard rubber neck is screwed into another hole in top, and closed with stopper *c*. The connections are thus made outside of cell, so that there is no possibility of connection corroding or cell leaking, whether upright or not. The cell is carried full of fluid; when used, the stopper is removed, the zinc introduced, and connection made with it. The zinc can be kept clean and amalgamated without trouble, and is not wearing, except when in use.

The core should be made of a bundle of wires, as they can be more thoroughly annealed than a mass of iron; the better annealed the quicker they demagnetize and the stronger the current induced. The insulated wire should be paraffined before it is wound, as it makes the insulation more perfect and keeps the moisture out of the coil. It is better to connect the inner end of the secondary wire with the outer end of the primary, as you can get the combined effect of primary and secondary currents, and do not get the inverse induced current from secondary coil when contact is made.

The current induced in the primary or battery wire at the breaking of the circuit is called the primary or the extra current; that in the secondary coil, the secondary current. But as there is a current upon making and breaking battery current, the former is called the inverse induced current and the

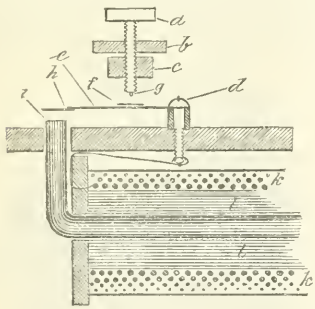


FIG. 2.

latter the direct. The direct induced current has many times greater tension than the inverse, because the inverse is induced from the battery current, while the direct is induced from the magnetism stored up in the core.

While the vibrator performs one of the most important offices in a medical induction coil, it has received little or no attention from electrologists in their writings. It is this which breaks the battery current and allows the energy which it has stored up in the core to form a current in the coils. The plan of a vibrator is shown in Fig. 2: *e* is vibrator, having a soft iron armature *h*, and platinum connection *f* soldered to it; *a* is adjusting screw, having platinum point *g* for contact with *f*. When contact is made between adjusting screw and vibrator, a current of electricity will "flow" from carbon through adjusting screw, which is connected with it and vibrator, to inner end of coil, which is soldered to *d*, and through coil *k* to zinc. This current magnetizes the bundle of wires *l* and soft iron bar *i*; *i* attracts armature *h*, drawing vibrator away from adjusting screw, thus breaking the circuit and demagnetizing the wires and rods, which releases the vibrator, the elasticity of which causes it to fly back in contact with adjusting screw, completing the circuit again. At each interruption we have a current induced, lasting, according to the researches of Professor Blaserna, about $\frac{1}{1000}$ second.*

The chemical effects of a current of this duration must be very minute, but would be in a given length of time just in proportion to the number of interruptions in that time; that is, one thousand interruptions per second would produce one thousand times the chemical results that one would. Now, if the therapeutic effects are due rather to the chemical effects of the current than to the simple shock, as I am led to believe by the results of the galvanic current as compared with the induced, and the induced current with rapid vibrations compared with slow, we have reason to believe that the more rapid the interruptions the better the therapeutic results. The interrupters on nearly all of the induction coils are too clumsy to be called vibrators, but should rather be called oscillators. The springs are large and long, supporting on the free end a heavy iron armature and a large metal disc for the platinum. Such an interrupter can neither make rapid nor regular interruptions. A vibrator, to make rapid interruptions, must be constructed in accordance with the laws of vibration. These laws will be found fully discussed in works on acoustics. The vibrator must be made upon precisely the same plan as the organ-reed which gives the highest pitch, as pitch depends entirely upon the number of vibrations in a given time. Temper, length and thickness, as well as uniformity, are important factors. It is highly important that no extra weight be put upon the free end, such as a heavy armature; the armature should be no thicker than the vibrator itself. The size of the vibrator depends upon the motive power that produces the vibrations, viz., the magnetism. From a long series of experiments, I find that copper, zinc, and silver, or copper and zinc, melted together, gives the best temper for rapid vibration. The tempering must be done by means of rolls, and requires considerable skill to get the proper temper. I make the vibrator one inch long and about one-eighth inch wide. On the free end I solder a piece of what is known as artist's tintype, about $\frac{1}{100}$ of an inch thick, in such a manner that it makes an extension of the vibrator instead of thickening it; this is only about one-eighth inch square and forms the soft iron armature. A piece of platinum foil, about same size, is soldered on surface of vibrator near middle for contact with adjusting screw (see Fig. 2). The vibrations from this interrupter are very rapid, as shown by the pitch and quality of current. I am conducting a series of experiments to determine the number of vibrations that can be produced per second, the result of which will be given at some future time.

It is of the utmost importance that the strength of the current can be accurately regulated by the operator. Nearly all of the current-regulators are based upon the following law: Where there are two or more circuits surrounding a magnetized core, a current will be induced in each inversely as the resistance. If a copper tube surrounds the core and a great resistance (like a part of the body) be included in the circuit of one of these coils, the current would nearly all be induced in the copper tube. If this tube be arranged so that it will slide on the core, and a portion of the core be uncovered, a current

* Gordon, Elec. and Mag., vol. i., p. 316.

will be induced in the coil surrounding that part of the core that has been uncovered by the tube. The tubes are generally placed between the core and the primary or battery coil, or between the primary and secondary coils. The last is objectionable, because the primary wire should be wound as close to the core as possible so as to magnetize the core as highly as possible. A compact coil cannot be made with a tube sliding within it. I overcome these objections by sliding a copper tube over the whole coil. The current is regulated to a nicety. The tube should not be made of brass, as the resistance is too great. The method of sliding the secondary coil over the primary is objectionable on account of the connections becoming broken while the coil is being moved, the result being to give the full force of the current induced in the primary wire, which, when applied to nervous patients, particularly if upon the head, is very pernicious.

It is held by many electrologists of authority that a different quality of current and different therapeutic results are produced by different sized wires. Based upon this theory, coils are sometimes made up of half a dozen different sizes, each size supposed to produce its special therapeutic effect and applicable to special cases.

But a coil that has an electro-motive force sufficient to produce a tension that will overcome the resistance of the body, and furnish a sufficient quantity of current for therapeutic purposes, will do all that a dozen wires can do. With the galvanic current, the same quantity passing through a circuit in a given time, will produce the same effects without regard to the kind of battery used. So with the electro-magnetic battery, the same quantity of current at each interruption and the same number of interruptions per second, will produce the same effect without regard to size of wire or kind of machine. Now a coil can readily be made of two wires, or even one, that will furnish a sufficient electro-motive force to give the desired quantity for therapeutic purposes and with a proper regulator any desired quantity can be obtained. Where several sizes of wire are used, it makes a complicated affair for the physician, requires a larger number of connections to get out of order, and makes it more mysterious for the inexperienced.

With due deference to the high authorities in both this country and England, who advocate this theory, I must say that, based upon electrical laws, and careful experiment with differently arranged coils, cells, and vibrators, it is fallacious.

I will next consider slow interruptions of the induced current as compared with slow interruptions of the galvanic current We are told by good authorities that slow interruptions are preferable to rapid in the treatment of paralysis, and that slow interruptions of the galvanic are preferable to either. There must be some reason why the galvanic current produces contractions in paralyzed muscles when the induced fails, but I have never seen one given. I will give the one that seems to me the most plausible. Supposing the interruption to be one a second with the induced current, we would have at each interruption a current lasting, say $\frac{1}{1000}$ of a second, and in another second another current of like duration. But with the galvanic battery, when the circuit is closed, the current passes until it is open again, and if of the same electro-motive force and resistance, we have several hundred times the quantity passing at each interruption, as with the induced; and so long as electricity is just the same as long as it flows in the one case as in the other, it is safe to assume that the difference in therapeutic results is due to the difference in the quantity that flows at each interruption. Then it is reasonable to suppose that, with a vibrator that will produce a large number of interruptions per second, we should obtain results nearer like those of the galvanic current; this I have found to be the case as I have repeatedly demonstrated in my experiments. In doing this, I make my slow interruptions in the induced circuit by removing the electrode, or using an interrupting handle.

THE ABSENCE OF ORGASM.

By FERDINAND C. VALENTINE, M.D.,

GUATEMALA, CENTRAL AMERICA.

I DESIRE to occupy a little space in the columns of THE MEDICAL RECORD by the recital of a few cases of absence of orgasm occurring in my practice, in the hope that some North American neurologist or gynæcologist may give a solution to the question, which is of indubitable interest to the parties of whom I propose to write.

CASE I.—Mrs. T. E. O——, aged twenty-five; North American by birth; married three years. Has had four miscarriages (one and one-half, two, two and one-half, and three months). Resident of this city for two years, with occasional short trips to the hot, malarial coast. Is now in the fourth month of pregnancy. Her general appearance is that of a refined, æsthetic person; height, four feet eleven and one-half inches; weight, one hundred pounds. Health good. Her education is of the unfortunate school of to-day, causing her to look upon woman's home duties with contempt, and maternity with disgust, which arouses the suspicion that the above-cited miscarriages were not as accidental as she claims. Her home life is not happy, because of her morbidly idealistic disposition, which she attributes to ungratified sexual appetite. She says that she feels mammary tumescence, and also swelling of the labiæ vulvæ, and an increase of the vaginal secretion with each sufficiently intense series of sensual thoughts. During such times erection of the nipples occurs, but not noticeably of the clitoris, which is rudimentary in this patient. In all other respects her genitalia are well developed and normal, except a slight right lateral flexion of the uterus. Separate private conversations with her and her husband yield the following: he is not a sensual man, and more inclined to think of his business as a means of gaining a competence for his wife; while she, although she claims to possess great affection for him, does not deny that she is unhappy with him, as she cannot rid herself of the idea of having made a *mesalliance*, and attributes her lack of orgasm to this cause. She confesses to having excited him to sexual excesses, in the endeavor to bring about a gratification of her passion, but all efforts have been futile. Tonics of all kinds, and damiana in various forms, have been used for about six months, with no result whatever.

CASE II.—Jesus N——, aged twenty-eight; single; seamstress. Native of Guatemala; of mixed Caucasian and Indian blood. Consulted me July, 1880, for the condition which I use her own words to describe: "I have been indulging in sexual intercourse with my lover since I was eighteen years old. I began to menstruate at thirteen. He seduced me,

and I have not cohabited with any other man. I have no desire for sexual intercourse, and submit to it only to please him. We have repeated the act as often as eight times in a night, and I have never had any pleasure therefrom, nor even excitement of any kind, neither at the beginning, nor during, nor at the end of the act. The act is not painful nor disgusting to me." This person is small, angular, and of poor muscular development, her form presenting the appearance of a girl of about thirteen or fourteen years of age, but physical exploration reveals no abnormality, except a rather large vulva. Her menstruation is normal, appetite good, and all other functions good. Her intelligence is mediocre, and her education nil. She cannot read. Nearly a year's treatment, as in the first case, yielded only negative results.

Case III.—Trinidád B. de F——, Mexican, aged nineteen; married seven months. Menstruation always regular and normal, both in quantity and quality. Not pregnant. She is of nearly pure Indian blood, and of a voluptuous appearance. No evident abnormality. She has erotic desires and pleasurable sensations during the sexual act; but, no matter how prolonged, she experiences no orgasm, unless, when at the time her husband ejaculates, she titillates her clitoris. But even then it is slight, and leaves her with her sexual appetite ungratified. Tonics and damiana have yielded no results.

Case IV.—Pedrona L. de E——, aged fifty. Mixed Spanish and Indian. Under treatment for secondary syphilis. Began to menstruate when twelve years of age. Was married at fourteen. Never was pregnant, and has menstruated regularly until the menopause, which came on at thirty-nine. After being married four months her husband discarded her, upon discovering her in sexual congress with a servant, whose embraces she sought with the intention of gratifying her sexual desires. Although possessing some means, she virtually became a prostitute, and cohabited with a number of men. She told me that, at one time, with the intention of gratifying her desire, she arranged a libidinous orgy with four men, who cohabited with her in immediate succession. She says that there was not half a minute's interval between each act, and after the last man had occupied his place a second time, she still not having succeeded in bringing on an orgasm, endeavored to do so by the abuse of a large candle. Long continued efforts resulted only in extensive excoriation and great debility, but her passion increased, if anything. Repeated efforts of the same kind always yielded the same negative results. Vaginal exploration reveals nothing further than the appearances incidental to old prostitutes, and various cicatrices from cauterizations. This case was not treated for the absence of orgasm.

Perhaps a few remarks on these four cases will serve to bring forth the matter more clearly. The absence of orgasm in them cannot be attributable to the age when sexual intercourse was first indulged in, which occurred in the first case at twenty-two, in the second at eighteen, in the third at nineteen, and in the fourth at fourteen. It cannot be attributable to nationality or race, Case I. being pure Caucasian, Cases II. and IV. mixed Indian and Caucasian, and Case III. almost pure Indian, with a suspicion of negro. It is hardly attributable to the husband's incapacity, as Case IV. has cohabited with all kinds of men, and never succeeded in bringing on an orgasm.

Case I. would offer a doubtful explanation on quasi-æsthetical grounds, still a curious contradiction thereto exists in the pregnancies. Would not the fact of this woman becoming impregnated be a weight in the scale of evidence in cases of pregnancy said to result from rapes on conscious women, and on those partially or completely unconscious from syncope, alcohol, opium, or anæsthetics. None of the cases present, to me at least, any sexual deformity sufficient to account for the complaint. Education, social standing, physical conformation can have no influence on the conjoint consideration of these cases, Case I. being a lady evidently of the highest walks of society, and of a superior education and intellect—slightly distorted, perhaps, by morbid thoughts, manifested in that frequently encountered romantic desire which many women possess to elicit sympathy for presumed unhappiness. Case II. is ignorant, vulgar, of the lowest walks of society. She cannot understand that any disgrace attaches to cohabiting with her lover, but is proud of the claim that she has always been true to him. The only point of similarity between Cases I. and II. rests with the general conformation, both being small, thin women, of anything but a sensual appearance. Intellectually, Case III. is between I. and II. She is of the middle class of society, of limited education, rather heavy intellect, and capable of very little independent thought. Her physique, however, differs from the rest, as among the majority of women she would be distinguished by her marked voluptuous appearance. This is the only case which by any means at all can bring on anything like an orgasm, *i.e.*, by titillating the clitoris during sexual congress. Case IV., although of the appearance incidental to persons having led a dissolute life, bears evidence of having physical attractiveness. Her intellect and education are slightly above the average, and she attributes her past immorality to nymphomania.

I am well aware that I am presenting nothing new to the profession, except, perhaps, that I dare speak of a matter which some incomprehensible morbid prudishness has prevented the profession from discussing. The sad results of this condition, as described in Case IV., alone should be sufficient incentive for our specialists to take the matter into serious consideration, if this has not already been done; while, if it has, why not give their younger colleagues the benefit of their experience?

The Annual Meeting of the Hospital Saturday and Sunday Association was held in St. Luke's Hospital a short time ago, and officers for the ensuing year were elected as follows: *President*, George MacCulloch Miller; *Vice-President*, Henry Blum; *Secretary*, The Rev. George S. Baker; *Treasurer*, Charles Lanier; *Directors:* The Mayor of New York, the Postmaster of New York, the President of the Chamber of Commerce, the Rev. Morgan Dix, D.D., the Rev. Talbot W. Chambers, D.D., the Rev. Thomas Armitage, D.D., Cornelius Vanderbilt, Henry E. Pellew, Robert Waller, George Jones, John S. Bussing, and a representative from each of the twenty hospitals connected with the association; *Executive Committee:* George M. Miller, the Rev. George S. Baker, George Jones, Willy Wallach, and Dr. Richard H. Derby; *Distributing Committee:* the Mayor, the Postmaster, the President of the Chamber of Commerce, Judge Samuel Blatchford, Jesse Seligman, Henry E. Pellew, and Morris K. Jesup.

Progress of Medical Science.

Boracic Acid as an Antiseptic in Skin Affections.—Dr. George Thin, of London, emphasizes strongly the advantage of using some preparation of boracic acid to overcome the offensive odor of the feet, and gives instances in which this treatment has been thoroughly successful. In some cases he recommends the wearing of stockings and cork-soles saturated with the acid. In others he prescribes an ointment, or rather a kind of glycerine cream, made as follows: a solution of boric acid is incorporated with a fatty basis of white wax and almond oil, which produce a soft, homogeneous mixture, free from the irritating crystalline plates of the crystal that are apt to separate from vaseline. He finds that this is also a very useful remedial agent for inflamed feet, as after long walking tours, and in such eczemas as are produced by the irritation of dyed underclothing.

Notes on Seven Fatal Cases of Hydrophobia.—Mr. Southam has tabulated his notes of all the cases of hydrophobia seen during two years' term of office in the Manchester Royal Infirmary, and furnishes some items of interest from a clinical point of view. As the treatment cannot be based upon any definite pathological condition which is to be met, it became purely symptomatic, and resolved itself into four principal methods: 1st, by chloral and opium; 2d, by chloroform and curara; 3d, by tracheotomy; 4th, by the hot-air bath. Of the four drugs mentioned, chloral appeared to secure the most beneficial results, prolonging life, and temporarily arresting the spasms. Its administration was readily effected hypodermically, the introduction of the needle causing no spasm. With regard to curara, the author found in two instances that there were alarming symptoms of respiratory weakness, once after one-sixth grain had been administered, and yet the spasms were not relieved. Tracheotomy, which was performed to obviate death from spasm of the glottis, was of little use. In six of the cases death was due to gradual heart-failure, and in only one to spasm of the glottis. In respect to the temperature, it was found in three cases to have risen above 103° F., and in one to above 105° F. The urine of all the cases contained albumen. In three instances there was sugar in the urine, indicating, probably, that some abnormal condition of the medulla oblongata was present.

Direct Transfusion for the Hemorrhages of Typhoid Fever.—At a recent meeting of the Clinical Society, held in London (November 25th), Dr. Mahomed related two instances where he had employed direct transfusion with marked, but temporary, benefit. In the first case, that of a man, twenty years of age, there was a collapse on the twenty-fifth day of his typhoid; on the thirty-fifth, he had a severe hemorrhage, which recurred twice on the following day. His pulse had reached 160° F., and he was fast sinking when the operation was performed. He rallied and even gave hopes of recovery, but six days later another hemorrhage occurred, and he began again to fail, dying on the forty-fourth day of the fever, nine days after the operation.

The second case was that of a married man, twenty-five years of age. He had a relapse on the twenty-sixth day. Two days later he had a hemorrhage, four days later three severe hemorrhages, and he fell into a state of exhaustion. Transfusion was performed the next day, but the patient died five days later from some lung complication. Dr. Mahomed stated that hemorrhage occurs in about seven per cent. of all cases, and that in them the fatality is about fifty per cent., and that in these instances one-half die from the immediate effects of the loss of blood.

For these cases he advocates transfusion, and recommends Aveling's apparatus.—*Medical Press and Circular*, November 30, 1881.

Filaria Sanguinis Hominis and Chylous Urinæ.—At a recent meeting of the Pathological Society of London, Dr. Stephen Mackenzie showed specimens of the human filaria in the freshly drawn blood, and at the same time specimens of the same parasite from the mosquito, which was found by Manson, of Amoy, to be the "intermediate host." The patient, who was present, was born in India of European parents. About a month before reaching England he had incontinence of urine, which later became milky, and still later contained blood. The urine passed at night contained more blood and more filariæ. Sometimes they were only found at night, appearing at first about 9 P.M., and being most numerous at midnight. At 9 A.M. some could be found. By inverting the habits of the patient, making him eat and work at night and sleep in the day, the filariæ were made to alter their habits, and only appeared during the day. These hæmatozoa measured from $\frac{1}{5}$ to $\frac{1}{120}$ inch in length, and $\frac{1}{2000}$ to $\frac{1}{3000}$ inch in breadth. It is said by Dr. Manson that the mosquito forces his proboscis into the lumen of the capillary, usually making his visit when the prey are in greatest numbers. The filariæ coil their tails about the proboscis, and are withdrawn in great numbers. Dr. Vandyke Carter was not disposed to lay very great stress upon the periodicity of the parasite. At some seasons he would be absent, and at others would appear in the blood. The parent worm, an animal of considerable size, perhaps three inches in length, was lodged somewhere in the lymphatic system—often in the urinary tract—and at intervals the young were discharged into the circulation. Often might filariæ exist in the blood, without producing any symptoms whatever.—*British Medical Journal*, October 22, 1881.

Operation in Cases of Diseased Joints in Phthisical Subjects.—Mr. Henry Smith, in a letter to the *Lancet* (November 12, 1881), confirms the views of Mr. Bryant, who has already spoken upon the above subject. Mr. Bryant does not think that an operation for the removal of a diseased joint in a phthisical patient is unwise, where the local disease is of such a nature as to prevent the recovery from the systemic disease. But apparently in such cases he confines his operations to amputation, while Mr. Smith does not hesitate to perform excision. The latter gentleman states that great benefit has resulted from excision in cases which he has observed. He mentions, as an instance, a tailor, suffering from tubercular phthisis and extensive disease of the elbow-joint, who, after operation, was greatly benefited as regards the phthisis and the joint disease. He also says that there are instances of lardaceous disease of the liver, where this condition will disappear after operation upon the hip-joint.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, February 4, 1882.

JUDGE COX'S CHARGE TO THE JURY.

THE charge of Judge Cox and the verdict of the jury in the case of Guiteau have already been widely approved and commented upon. But the medico-legal bearings of this final judicial utterance and of the decision which followed will for a long time merit discussion.

We venture to say that few judges, in a trial so full of bitterness and feeling, have given a charge showing such impartiality and clearness of statement, and such full grasp of the subject in most of its relations. In only one point do the views set forth deserve criticism.

The learned judge begins by stating that in the crime of murder there are three elements: the act, malice, and sanity. In the case of Guiteau the act and also malice, in its legal sense, were acknowledged by the defence, therefore this question alone remained for the jury: Was the prisoner insane? If so, he was irresponsible and committed no crime. Here is introduced Judge Cox's test of responsibility: "You are to decide," said the court, "whether, at the time of shooting President Garfield, the prisoner, through brain disease, did not know the nature of his act. If he did know what he was doing and that it was wrong, he was and is responsible, whether he had brain disease then or not." This test is unquestionably incorrect in science, and leaves the way open to false and unjust decisions. The true test, as we have repeatedly said, is that laid down by all sound medical jurists, and affirmed in several courts: Was the person compelled to do the act by disease of his brain? It is abundantly established, indeed, it is known (as is stated by Ray) to every ward attendant, that the insane can commit acts which they know to be wrong.

This particular point in the charge, however, has only a general bearing or importance. No test of responsibility would have modified the verdict, nor does it diminish the value of the admirable summing up which followed.

Guiteau was by the defense claimed to have partial insanity of a chronic form. This subjected him to the control of occasional delusions and the indulgence of morbid propensities. What the jury had to consider, however, was whether, supposing him partially insane, he was at the time of the assassination under the control of his disease. The things by which they must decide this were the speech and conduct of Guiteau as interpreted by the experts and their own good sense. The facts regarding Guiteau's speech and conduct before and subsequent to the trial were then recited by the court. These facts bore especially upon the question, whether the prisonor was acting under an insane delusion. If the evidence given represented the facts, then, said the Judge, "there was nothing in the prisoner's conduct or speech which showed the existence of a delusion."

This part of the Judge's charge went severely against the prisoner. It was evident that he considered that the evidence of Guiteau's having originally had any inspiration theory was insufficient; that the assassin did not act under an insane, but a morbid and vicious impulse. Both judge and jury subscribed to the graphic picture with which the charge is closed: of a "youth of more than average mental endowments, surrounded by certain immoral influences at the time his character was being developed; commencing life without resources, but developing a vicious sharpness and cunning; conceiving enterprises of great pith and moment, that indicated unusual forecast though beyond his resources; consumed all the time by unsated egotism and a craving for notoriety; violent in temper, selfish, immoral, dishonest; leading a life of hypocrisy, swindling, and fraud; and finally, as a culmination of his depraved career, working himself into the resolution of startling the world with a crime which would secure him a bad eminence."

If we add, that as the organic basis of his character there was a nervous system not wholly sound, yet not seriously impaired, Judge Cox's portraiture will be sufficiently complete. Such men deserve to be punished when they violate law.

A CURIOUS CASE.

A SUIT likely to bring out some interesting physiological and pathological, as well as legal points, has recently come before the Supreme Court at Suffolk, Mass. The defendant is a Catholic clergyman, the plaintiff a girl of about fifteen years of age. It appears that in the spring of 1879 the plaintiff became subject to attacks of trance. In this condition she saw visions of heaven and of angels, and had communications from the same. Her trances were brought about by looking at a little image of a

cherub made of pasteboard. She had at first two of these images, which she said were given her by her deceased brother. One of them was afterward presented to a relative.

The trance conditions naturally excited the interest of the neighbors. Finally the parish priest (the mother was a Catholic) began to visit her. He seems to have regarded the attachment of the child to an unconsecrated image as a kind of idolatry, and tried to get her to substitute a rosary in its stead. The rosary did not have the desired effect, however. Finally, while the child was in a trance the priest took the image and cut off its head, stuck it on a penknife and held it before her. The girl uttered a shriek and went into convulsions. The priest then carried away both images. After this the child, when in a trance, was unable to speak and describe her visions. She apparently suffered in consequence. The priest was, therefore, summoned whenever the trances came on. He held up the image and thus relieved the child. After a time, however, he refused to come, and also refused to give up the images. Meanwhile the trances continued, but they were no longer of the usual kind. Instead of seeing visions and talking concerning them, the girl would pass into a profoundly lethargic condition. Her health, which had previously been excellent, became impaired.

The parents, after making fruitless attempts to secure the images from the priest, have at length brought suit against him for their possession. Before the suit was brought, an appeal was made to the archbishop to compel the restoration of the images. With this appeal there was enclosed a letter from the girl's attendant physician, Dr. R. M. Hodges, who wrote that "the loss of the figures seemed to have produced a deep impression on Mr. Gannon's daughter, and I am of the opinion that their restoration would be of advantage to her, as regards her condition of hysteria in which she is now and has been for a considerable period of time."

The account of the case which we have given is obtained from the *Boston Advertiser* and seems to be entirely trustworthy, although it presents only the plaintiff's side. It certainly has very curious and novel features.

A NEW SLEEP-PRODUCING AGENT.

Professor C. Binz, in a series of articles contributed to the *Berliner klinische Wochenschrift*, announces the discovery of nerve-depressing and sleep-producing properties in ozone.

The accepted view regarding this gas has been that it is very easily decomposed, nascent oxygen being set free; that it is extremely irritating on this account to the tissues, acting much like chlorine, and that it cannot be absorbed by the blood. Binz, however, shows that, in proper quantities, it is not irritating, can be inhaled and absorbed, producing, as he claims, peculiar effects on the nervous system.

The gas was generated by the sparks of an electrical battery containing four of Bunsen's elements. The ozonized air was conducted by a tube through chloride of calcium. It was then carried by a tube either to a large air-tight glass bell, in which an animal was placed, or to a mask which was worn by the persons who inhaled it. Animals were first tried. If a strong and long-continued dose of the ozone was supplied, the usual symptoms of laryngeal and tracheal catarrh with strangulation and death occurred. If supplied in more diluted quantities for less than two hours, sleep or a lethargic condition was produced. Frogs, rabbits, and kittens, reacted best. The latter would, in the course of ten or fifteen minutes, become quiet and then lie down and apparently sleep. Shaking the jar would not arouse them. When removed and supplied with fresh air, however, they soon returned to their normal condition. Several animals were killed after having been in this condition, and no changes in the air-passages or other tissues noted. Precautions were taken and experiments made to show that there was no carbonic acid-poisoning and no introduction of nitrous oxide gas. The animals could, as a rule, be kept in the bell jar for two hours before any symptoms of irritation appeared, even of the outer parts of the air-passages.

The experiments were then tried upon human beings, Dr. Hugo Schultz was the first to submit himself. Subsequently five other gentlemen inhaled the gas. Three of them were put to sleep by it, the others were slightly stupefied or otherwise depressed. The time required for bringing on sleep varied between six and sixteen minutes. The sensations during this time were very agreeable. After removal of the gas the sleeper would awake within half a minute, generally sooner. It was suggested that in one quite susceptible person the condition was a hypnotic one, but inhalation in the same way of pure air produced no effect. After awaking there was some feeling of fatigue, but this soon passed away.

Large and prolonged doses of the gas produced sensations of nausea, dizziness, and strangling. But the diluted ozone was breathed for over half an hour without harm. Binz states that in too small amounts no effect is gotten; in too large ones, irritation is produced. He compares its action in this respect to that of alcohol when given. Prof. Binz claims no practical results from his discovery as it stands at present, but thinks that like every new scientific truth it may have eventually some useful bearing.

THE WORK OF THE STATE SOCIETY.

At the coming meeting of the Medical Society of the State of New York, several interesting subjects will be brought up for discussion. Aside from the scientific papers, of which a goodly number are promised, certain matters bearing upon legislation

for the profession will doubtless be considered. Among these may be mentioned with due prominence, on account of its importance, the report of the committee to revise the Code of Ethics. It is safe to say, whatever may be the recommendations offered in the revised code, that their significance has been thoroughly considered, and all the pros and cons carefully and conscientiously weighed. The character and standing of the committee guarantee the foundation for such a prediction. Whether the judgment of these gentlemen shall be confirmed by that of the members of the society can, of course, only be conjectured. It must be remembered, however, that the committee has a difficult task to perform. It will be compelled to compromise between the ultras and liberals to the extent of pleasing both, while at the same time the interests of the profession, as a whole, are properly conserved. Certain men look upon the present elaborate code as so many articles of faith, to question which would appear like the rankest heresy; while others consider it an absolute failure as regards its application to the present conditions and associations of medical men, and desire its abolishment altogether. It is quite evident, in view of these facts, that the majority of the profession call for some happy and consistent mean which shall eliminate the useless and impracticable injunctions of the present instrument, and at the same time preserve all of the good rules which it has been found possible for conscientiously honest men to follow.

It needs no argument to prove that any new code can safely dispense with the moral platitudes which abound in the present one, can do away with some of the absurd provisions which tend so directly to interfere with the liberty of conscience of the subject, and can omit many of those injunctions begotten in the apparently righteous, but really dogmatic, spirit of half a century ago. The tendencies of the present age are in the direction of the absolute liberality of opinion in all things. We are arriving at a point when we can safely leave matters of conscience and fair dealing to the sound judgment of intelligent and honorable men; and the more the necessities of the situation in that respect are considered in the formation of any code, the better will it be for the profession and for humanity. Of course it is hardly to be expected that the requirements of every case cannot be perfectly met; but general principles of action can be explicitly presented, the force and significance of which every right-minded man can directly and intelligently apply. A lengthy code is not needed. In fact, the shorter it can be made the better. The letter of any law governing honorable conduct is of small importance compared with the proper appreciation of its spirit. But we have every reason to believe that all these points will receive their due consideration by the members of the committee.

The practicability of altering the present law relating to the practice of medicine in this State, will also claim attention. An effort will be made to give more force to the perjury clause, and other objectionable features will be eliminated which have so directly militated against its proper enforcement. The recommendation for a change will be based principally upon the experience of the County Society in the prosecution of offenders. It is difficult to understand how the desired alterations can be effected short of framing an entirely new law. We believe that a movement to that end is contemplated by the delegates from this county. Bearing upon the question of changing or modifying the law, is the one having reference to compulsory State examinations for license. This will also be advocated by the New York County Society, and will doubtless, for obvious reasons, meet with lively opposition from some of the colleges. In reality, however, if viewed in the proper light, it is destined to benefit all parties concerned, to elevate the standard of medical education, to challenge the schools to do their best in turning out proper men, and to effectually shut the door against unqualified practitioners of every kind. But we shall have occasion to say more on this subject at another time.

Reviews and Notices of Books.

A Study of the Tumors of the Bladder: With Original Contributions and Drawings. By Alex. W. Stein, M.D., Surgeon to Charity Hospital, etc. 8vo, pp. 94. New York: W. Wood & Co. 1881.

The author of the present monograph on vesical neoplasms, has had the rare good fortune of observing four cases of the affection within a few years. He has made a careful study of the literature of the subject, collecting all the more important cases which he found accessible. These records, in conjunction with his personal observations on tumors of the bladder, have furnished him with ample material for the preparation of his monograph. It is certainly the most complete description as regards the practical details of symptomatology, diagnosis, and treatment of these growths, that can be found in the English language. The text is elucidated by a number of full-page plates, most of which are admirably executed.

Favorite Prescriptions of Distinguished Practitioners: With Notes on Treatment. By B. W. Palmer, A.M., M.D. New York: Bermingham & Co. 1881.

Modesty is a virtue, even when it lives in the breast of the ambitious medical aspirant for literary fame. Here is Dr. Palmer, who collects a number of well-known and time-honored prescriptions in a diminutive duodecimo stripling, and then, fondly contemplating the result of his mental parturition, informs us that the "design of the writer will have been accomplished if he succeeds by his offering in rendering more available for every-day use and guidance the practical treasures of medical wisdom which have been gathered from the earnest labors and care-

ful observations of the most distinguished practitioners of the age."

The student or practitioner who will depend on this or similar collections for his therapeutical recommendations should be earnestly solicited to change his profession. Nothing is more calculated to lower the standard of professional intelligence than to encourage the student or young practitioner to rely on these ready-made formulas. It deadens the capacity for original thought, and will, in time, hopelessly cripple all self-reliance, than which there is scarcely a quality more essential at the bedside. No; let the beginner study well the physiological action of drugs, and then he will be able to combine his remedies in such a way as to make his prescriptions fulfil the varying indications of each individual case. And then, also, he will learn to discard the thought-killing aid of collections like the one before us.

THE PREVENTION OF STRICTURE AND OF PROSTATIC OBSTRUCTION. By REGINALD HARRISON, F.R.C.S., etc. London: J. & A. Churchill. 1881.

THE first portion of this little volume, dealing with the prevention of stricture, originally appeared in the *Lancet* of May 15, 1880. The profession are already familiar with the views of the author on this subject, Dr. Harrison believing that thorough irrigation of the urethra by a suitable catheter will do much toward lessening the frequency of strictures after gonorrhœa.

As regards the second portion of the book, it embodies the description of the author's method of preventing the occurrence of prostatic obstruction, or, more correctly speaking, attempting to prevent it. He strongly urges the employment of persistent catheterism on the first indication of the prostatic enlarging. In addition, he uses olive-shaped dilators, made from two to four inches longer in the stem than ordinary urethral bougies, in order that the olive portion may be fairly passed into the bladder. It is quite obvious that considerable relief, if not a perfect cure, should follow the conscientious and persistent use of these instruments, and, indeed, Dr. Harrison's experience has demonstrated that this is the case.

DIE KRANKHEITEN DER FRAUEN: Aerzten und Studirenden geschildert. Von DR. HEINRICH FRITSCH, Professor der Gynæekologie und Geburtshülfe in der Universität zu Halle. Mit 159 Abbildungen in Holzschnitt. Braunschweig: Wreden's Sammlung Kurzer Medizinischer Lehrbücher. 1881. (THE DISEASES OF WOMEN. By DR. H. FRITSCH. Wreden's Library of Medical Works.)

IT appears that the publishers of this work have determined to issue a series of short and concise textbooks on subjects embracing the most important departments of medicine. This plan has probably been suggested by the success of Wood's Library of Standard Authors. Judging from the excellence of the first volume, this undertaking will be favorably received by the profession, and meet with a merited success.

Prof. Fritsch, in the 416 pages of the book before us, disposes of the most prevalent diseases of women in a manner which leaves nothing to be desired. His style is lucid and simple, the diction concise, and all statements go directly to the point; accordingly he is able to convey much information in few words. Special attention is paid by the author to treatment, and this circumstance will doubtless contribute to make the present work a deservedly popular one with students and practitioners.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 13, 1881.

DR. T. M. MARKOE, PRESIDENT, IN THE CHAIR.

THE PRESIDENT read a paper on

EXOSTOSES OF THE POPLITEAL SPACE (see page 121).

DR. L. A. STIMSON asked the President if he traced any connection between these growths and the conjugal cartilage; in other words, did he make any distinction between them and the ecchondroses of Virchow?

THE PRESIDENT thought there was no connection between them, because in all his cases the growths were two inches, at least, below the head of the tibia. He believed that they did not belong to the ecchondroses of Virchow.

DR. STIMSON remarked that the fact that the growths were at some distance on the diaphysal side of the epiphysis was not an argument against their having originated in the conjugal cartilage; because it is well-known that, as the bone grows in length, the conjugal cartilage advances with the end, so that the portion of bone which in early life immediately adjoins the epiphysis is, when adult life is reached, more or less near the centre of the shaft. In illustration of this he mentioned the fact that it is not uncommon to find multiple growths upon the same individual occupying vertical positions on the diaphysal side of the joint and usually increased in size from joint toward the centre.

In one reported case, speaking from memory, there were *seven* such growths. The origin in the conjugal cartilage, of some of these growths at least—such, for example, as probably the small one upon the humerus, which had been presented—was accepted by all writers, and they show that there are two varieties, one in which persisting embryonal cartilage occupies the tip of the process, and another in which it lies at the base, between it and the shaft.

The clinical evidence points in the same direction; because, as a rule, all these exostoses ordinarily cease to grow at about the period of consolidation of the epiphyses, and it is exceptional to find them continuing to grow, as in Dr. Markoe's second case, until the age of thirty-eight years. They are recognized as the phenomena of adolescents, and have been described, among others, by Gosselin as among the diseases of youth. The same writer also mentions, in his lecture upon this subject, a case coming under his own observation, where death by pyæmia followed a compound fracture of one of these growths.

DR. WEIR referred to a case which he saw in his wards at St. Luke's Hospital, some thirteen years since. The patient was a boy, sixteen or seventeen years of age. The exostosis was situated at the outer surface of the femur, low down. It was exposed, shaven off at a level with the bone, and inflammation and suppuration took place in the wound pocket. Complete recovery, however, occurred, and he had seen the patient recently, and there had been, as might be anticipated, no return of the disease. In connection with such and other operation wounds for necrosis, ununited fracture, etc., he referred to the fact that Lister of late had spoken especially

of treating them antiseptically without attempting to close the wound at all. He also referred to the fact that for exostoses of the femur, Maunder, many years ago, refrained from resorting to the cutting operation, and broke the tumor off with a hammer without making an incision through the skin. In those cases the tumor ceased to grow, and was no longer a source of irritation.

Dr. Keyes recalled a case in which there were two pointed exostoses upon the inner side of the knee at different distances below the knee-joint. One tumor was as large as a pullet's egg, and the other as large as an Italian chestnut. They were absolutely hard to the touch, appeared to be bone, and occurred in a girl sixteen or seventeen years of age. They gave the patient no inconvenience, and no operation was performed. He suggested, in cases in which there was a small pedunculated base, that, instead of cutting down in the popliteal region and using the curved chisels, presented by Dr. Markoe, it might be possible to cut down on the side of the limb and use a straight chisel for the removal of the mass.

The President said that it was always desirable to cut through the compact lamina completely around the neck of the tumor before it was safe to break it off. Dr. Keyes' suggestion, however, might be practicable in certain cases.

Dr. Weir inquired with reference to the mode of removal which Dr. Markoe employed in the cases of exostoses of the toes.

The President replied that they were removed by partial amputation. He first removed the nail and its matrix entirely, then carried the incision around the tip of the toe, leaving a good flap, which could subsequently be brought over, and then removed the anterior half of the distal phalanx.

Dr. Stimson suggested, in cases where complete removal of the growth was impracticable and dangerous, that shaving off the cartilaginous surface, from which the growth is supposed to proceed, might be sufficient.

The President replied that Dr. Buck in one case did precisely the same thing; that is, he burned off and cut off the cartilaginous surface entirely, but the growth recurred after each operation. Dr. Buck's case was one of exostosis of the toe, but the President regarded exostoses of the toe and of the lower portion of the femur and of the upper portion of the tibia as identical in nature.

Dr. Post had removed a number of exostoses from the great toe, and had lost sight of the patients entirely; still he thought that the tumors had not returned, for, probably, the patients would have reappeared had the operations not been successful.

The President remarked that in all of his cases of exostosis of the great toe, operated upon in the manner described, the cure had been permanent.

SARCOMA OF THE TIBIA.

Dr. A. C. Post narrated a case as follows: A boy, fifteen years of age, was brought to him with a very large tumor, occupying the upper part of the left leg, about a hand's breadth below the knee. The tumor was evidently sarcomatous in character. The point of special interest consisted in its rapid growth. The patient had previously enjoyed good health—although never very robust—until about two months ago, when he noticed a swelling about the size of a hen's egg. From that time it had rapidly increased, was painful, and the integument covering it was of a dusky red color, and somewhat œdematous. The tumor was firm, yet yielded slightly to pressure, and gave an obscure sense of fluctuation. The circumference of the limb was forty-eight centimetres; the circumference of the opposite limb, twenty-three centimetres. The proportion of the one to the other being about the same as that of the thumb to the wrist. He amputated the thigh, and found that the morbid growth originated from the periosteum of the tibia, and had grown in all directions from the bone. There were fine spiculæ of bone, needle-like prolongations, traversing the substance of the tumor. Dr. Post asked if it was not rare for a tumor to acquire such dimensions in so short a time. [The specimen was presented to the Society January 10, 1882.]

FRACTURE OF CATHETER IN THE URETHRA.

Dr. Erskine Mason narrated a case as follows: A physician came to his office on the 5th of July, 1881, with a man forty-three years of age, and giving the following history: The patient had a very tight stricture and retention of urine. The physician was sent for, and tried to introduce the smallest flexible instrument he had, and failed. He then took a small Thompson's metallic catheter—about a No. 3 French—and endeavored to introduce it. It passed very well until, as he supposed, it was about to enter the bladder, when it met with resistance, and, on attempting to withdraw the instrument, the straight portion down to the curve came away, leaving the curved portion behind. The patient was suffering from no pain, and complained of no inconvenience. The accident occurred about four o'clock in the afternoon. Dr. Mason saw him about half past five, and sent him to Bellevue Hospital with a note to his house-surgeon, asking him to try to pass a filiform bougie into the bladder, and to let him know if he did not succeed, and also as to whether he felt any substance in the urethra. The small bougie was passed into the bladder, and no foreign body was detected. Dr. Mason saw the patient the next morning, and found that he had passed water in a very small stream, sometimes only by drops, and had succeeded in relieving his bladder. He was able to reach the bladder with a fine whalebone bougie, without obstruction or coming in contact with a foreign body, and he then supposed that the end of the metallic instrument had broken off within the bladder. With the whalebone bougie as a guide, he proceeded to enter the bladder by the median operation for stone. The bladder being entered, a thorough search was made with both the finger and forceps, and he was unable to detect any foreign substance whatsoever. He then examined thoroughly the tissues in the perineum, through the wound, and also through the rectum, and was unable to convince himself that he found any foreign body in the surrounding parts. He then divided the strictures anteriorly, relieved them completely, passed a large sound into the bladder, and left the patient, who subsequently did perfectly well. Nothing unusual occurred in the progress of the case until the morning of the 31st of July, when the house-surgeon, while attempting to pass a large steel sound, felt that it clicked against something in the urethra. On the following morning the patient produced the point of the metallic instrument, which had passed through the wound in the perineum. It was about two inches in length. The metallic catheter had separated at its weakest point, in the region of the eye. The patient recovered entirely, and left the hospital able to introduce a No. 18 English sound. The portion of catheter broken off and re-

maining had evidently made a false passage for itself and lodged in the soft tissues, from where it had gradually worked its way out.

RAPID LITHOTRITY IN OLD MEN.

Dr. Keyes narrated the history of two cases of rapid lithotrity, in illustration of the tolerance of this operation. In the first case, the patient was seventy-five years of age. Seventy-five minutes were occupied in the operation, and 393 grains of calculus material were removed. It was the most serious and difficult operation of this kind which he had ever performed. The patient was exceedingly feeble; had been for some time confined to the bed by pain and feebleness, and was using anodynes to control frequent desire to urinate. In simply sounding him, the hemorrhage was profuse. The introduction of the evacuating-tube was attended and followed by very profuse bleeding, although no cutting of the urethra at any point had been done. The patient's condition was so feeble that it became necessary to administer brandy by the rectum, after operating an hour and a quarter. He vomited coffee-ground material, and having been so long under ether, it was deemed advisable to postpone further procedure, although it was evident that a small portion of the stone still remained in the bladder. The patient had no chill or subsequent trouble, except very great pain, a more intense prostration, and delirium, with mild feverishness. He rallied entirely from the influence of the anæsthetic and from the operation, and is now waiting to recover strength sufficient to have the remaining portion of stone removed. In less than three weeks the patient was out of his bed and going to his meals. Dr. Keyes felt certain that any other operation would have killed the patient.

The second case was that of a man fifty-seven and a half years old, upon whom he operated in 1878. The operation lasted forty-five minutes, and 136 grains of calculus material were removed. The patient had long been a sufferer from his bladder trouble; desire to urinate had been almost constant, and he had been obliged to resort to opium freely for the relief of his suffering. He, however, made a good recovery from the operation, so much so that he was able to retain his urine for six or eight hours in succession, was able to attend to his ordinary occupation, and engage in some sports, such as trout-fishing and the like. Within a few months he had had what was apparently a mild attack of renal colic. Otherwise he retained his usual good health until December 1, 1881, when he had an attack of renal colic. On the morning of December 3d, he had a severe chill, suffered great pain in the loins and hips, his urine became scanty, and he died comatose on the 8th of December. At the post-mortem examination, the right kidney was found entirely degenerated, one half of the capsule being occupied with a cyst, which contained an ounce and a half of serum. The left kidney was double the natural size, was intensely congested, its surface was covered with ecchymotic spots, and the pelvis was distended with bloody urine, a mulberry calculus blocked the entrance to the ureter. The bladder was not contracted; the walls were somewhat thickened; the mucous membrane moderately congested; the prostate was not hypertrophied. At the base of the bladder there was a depression, which was probably occupied by the calculus removed three years ago. The bladder contained no stone. Dr. Keyes thought it altogether probable that the right kidney was substantially in the condition found at post-mortem at the time of the operation. He thought that both cases were good illustrations of the tolerance with which rapid lithotrity was borne by patients advanced in years.

Dr. Weir, in connection with Dr. Keyes' cases, referred to obstruction of the ureters as being a point of special interest. The most common place where such obstruction occurs from a calculus is within three or four inches from the kidney, or at the junction of the ureter with the bladder. In these cases, so ably described by Roberts, of Manchester, he believed that there is yet hope of saving the life of the patient by means of a surgical operation. With a history of renal colic upon one side, with or without, in certain instances, a subsequent attack of renal colic upon the other side, suppression of urine or, as was more common, scanty discharge of urine with greatly lowered specific gravity, and threatening head symptoms, he was prepared to make an incision in the groin, and either to extract the stone from the ureter if possible, or to create a fistula above, or to endeavor, with the hand in the rectum, to force the calculus into the bladder. Mr. Annandale had demonstrated that from the loin the ureter could be exposed for a considerable length.

Dr. Weir also referred to a case of stone in the bladder as follows: A patient, seventy years of age, had during the last six months suffered from symptoms of stone in the bladder. He was under the care of Dr. Robert Abbe, who proceeded to perform rapid lithotrity in the usual manner. He was able to effect a number of seizures, and occasionally a very large one, one and one-half to two inches, but he was prevented attempting in the large grasps to either crush the stone by inability to rotate it, and thus satisfy himself that the vesical walls were safe. At other times he was able to effect only a very small grasp. After several attempts to overcome the unusual difficulties of the case, which were also experienced in several trials by Dr. Weir, Dr. Abbe effected a seizure in such a position that, while the calculus could not be rotated laterally, it could be pushed back and forward, its differentiation from the bladder being thus effected. The lithotrite was then shut and removed, and when its jaws were examined they were found to contain a portion of a soft French catheter. Upon further inquiry it was then learned from the patient's son that the man had had an attack of retention of urine about six months previously, when a soft catheter had been introduced to relieve the bladder, and had been allowed to remain, and that the instrument had disappeared, the patient stating that he had passed it in the water-closet. It had not passed, however, but had entered the bladder and had coiled up there. The diagnosis being satisfactorily made, the two remaining fragments were luckily seized with a small Thompson's lithotrite and readily extracted, and the bladder subsequently evacuated by the aspirator tube of a large amount of crushed phosphate calculus. The patient subsequently did well.

INTESTINAL OBSTRUCTION.

Dr. Briddon narrated a case as follows: At four o'clock on that afternoon he was summoned to visit a patient at the hospital department of the Colored Home, who was said to be suffering from intestinal obstruction. The man was about thirty-five years of age, and entered the institution three weeks ago with retention of urine, which was not relieved by the catheter, but by aspiration, and the bladder

was punctured three different times. Ten days ago a soft instrument was introduced and continuous dilatation practised. At the present time there was no trouble with the bladder. Two or three days ago the man began to suffer from constipation, having had no evacuation from the bowels for four or five days, and yesterday tympanitis developed. The patient's pulse was 100, the temperature almost normal, the abdomen tympanitic, and he had almost incessant vomiting. When Dr. Briddon saw the patient he was upon his hands and knees, straining in efforts of vomiting. There was no hernia, and no abdominal tumor to be felt either through the walls or in the rectum. He gave directions that the patient should be narcotized with ether, inverted, the rectum filled with water through a funnel, as much as could be injected, that he should receive opium in doses sufficient to quiet the pain and render him comfortable, and called a consultation with a view to subsequent surgical interference. He had no idea as to what the cause of the obstruction was. He asked the society what condition would warrant surgical interference in such cases. His own impression was that delays were more dangerous than action.

Dr. Post thought that in obstinate constipation of the bowels, such as could not be relieved by other means, it was safer to perform laparotomy than to leave the patient to his fate.

GRIFFE DE LA MAIN.

Dr. Weir referred to a case of claw-shaped hand, *griffe de la main*, due to division of the ulnar nerve. He attempted to secure the ends of the divided nerve and to bring them out for the purpose of uniting them, but failed. The injury occurred four months ago. He was unable to find the upper extremity of the divided nerve. Dr. Weir asked for the experience of the members with reference to the success of this operation.

Dr. Briddon referred to a case which he had reported to the society. In that instance the divided extremities of the nerve were brought together and united by suture through the neurilemma. The operation was performed several months after the injury. The parts came into accurate apposition without any tension, but the result was negative.

The President asked if there were any cases upon record of successful operation after the elapse of so long a period after the receipt of the injury.

Dr. Weir replied that there were, although there were many failures.

Dr. Stimson referred to a remarkable case which had been reported in the London *Lancet*. It was one in which the sciatic nerve was divided, and it was necessary, in order to bring the divided ends into apposition, to flex the leg upon the thigh, and extend the thigh upon the body, and draw them back as far as possible. Good union of the nerve, however, was obtained with restoration of power in the limb. The divided extremities of the nerve in that instance were four inches apart.

Dr. Weir thought that late researches had gone far to prove that the history of success reported in many cases had been incorrect; the success attributed to the operation being due to the supply given to the parts by neighboring nerves.

Dr. Stimson remarked that this was certainly true of sensitive nerves.

The society then proceeded to the transaction of miscellaneous business.

Correspondence.

THE QUESTION OF REFLEX DISTURBANCES FROM GENITAL IRRITATION.

To the Editor of The Medical Record.

Dear Sir: I was somewhat surprised to read the grave charge that Dr. Newton M. Shaffer makes against me in the last issue of your journal, and the feeling was not lessened when I turned to his articles to see whether I had inadvertently done him an injustice. Dr. Shaffer states "that the *most important conclusions* reached by Dr. Gray, and that many of the points referred to by him and discussed subsequently by the eminent gentlemen present (at the meeting of the New York Neurological Society), have been covered by me in an editorial on 'Indiscriminate Circumcision' in the May (1881) number of the *Annals of Anatomy and Surgery*, and subsequently in remarks on the subject of 'Genital Irritation' in the July (1881) number of the same journal. And, further, that my expressed doubts regarding the existence of reflex paralysis from genital irritation in childhood, supplemented by the same opinion from my friend, Dr. E. C. Seguin, has been confirmed by the very eminent authorities with whom Dr. Gray has been in correspondence."

Please remember, Mr. Editor, that the italics are my own.

The upshot of all this is, then, that my most important conclusions and many of my points have been "covered" by Dr. Shaffer, and that he had expressed doubts which other gentlemen had not only had the temerity to entertain, but had also communicated to me.

It is to be regretted that Dr. Shaffer did not see fit to give the proof of his first assertion in more detail than is contained in a general allusion to two articles written months ago. Let me now make an abstract of all matters in Dr. Shaffer's two papers that are germane to this charge, compare them with all similar matters in my own, and let the readers of the Record judge for themselves.

In his first paper (*Annals of Anatomy and Surgery*, May, 1881, p. 244) Dr. Shaffer says, speaking of circumcision: "And yet this operation has sometimes been followed by temporary relief in cases other than genito-urinary." He then cites a case of Pott's disease in a child, to which had come relief after circumcision. This improvement, he states to the parents, "did not come at all from the operation, but from the enforced rest which it and the subsequent treatment necessitated." We are next told of a case of incipient Pott's disease improved by a week's rest in bed; and the statement is made that "incipient and obscure joint and spinal disease" have been seen by Dr. Shaffer to be improved by the rest following circumcision. In the great majority of instances, however, he has seen no effect from the operation. He then informs us: "Among the many cases of this so-called 'reflex paralysis' that I have seen, I have found none that did not prove to be a lateral sclerosis of the cord, with a greater or less modification of co-ordinating power . . . some movements would be awkwardly executed . . . or there would be a slight ataxic movement of one or both of the lower extremities in the ordinary movements." I certainly did fail, Mr. Editor, to give due credit to this original description of a lateral sclero-

sis with ataxia, and I hasten to make amends by calling the attention of neurologists to the interesting discovery. Three cases of lateral sclerosis—without ataxia—are then narrated, in which circumcision had no effect. In conclusion, circumcision is advised in cases of preputial irritation, or for sanitary reasons; and these words are used: "Much good frequently results, and many patients have derived permanent relief from incontinence of urine, priapism, etc."

In Dr. Shaffer's second paper, in the July number of the *Annals*, the gentleman states his belief that circumcision should not be done except "for simple local and directly traceable genito-urinary troubles; and the paper concludes with: "A careful inquiry into the details of the previous history (of every case of so-called reflex paralysis) and a painstaking study of the symptoms and condition develop a cause for the 'reflex paralysis' wholly unconnected with the undeveloped genital organs of childhood." A case of Drs. Fruitnight and Taylor is also spoken of, in which a post-diphtheritic paralysis improved after circumcision. Dr. Shaffer attributes this relief to the fact that "nature had done her work unaided by the circumcision."

This is fairly the gist of Dr. Shaffer's two articles. To sum up, the views expressed are that circumcision causes improvement in other than genito-urinary diseases, but that this improvement is due to the rest following the operation; that lateral sclerosis with ataxia is the most frequent cause of "reflex paralysis;" that incontinence of urine and priapism are frequently relieved by circumcision; that circumcision should be performed to remove præputial irritation, but only for local and distinctly traceable genito-urinary troubles; that most cases of so-called reflex paralysis have a cause outside of the genitals—in the aforesaid sclerosis, as follows logically.

The views of Dr. Shaffer, concerning the value of rest, have certainly not been borrowed by me, for I state: "The patient usually obtains rest, as has been suggested by Dr. Shaffer, but this is usually short in my own cases, not extending over twenty-four or forty-eight hours, and is, therefore, obviously inadequate." Can Dr. Shaffer point out any paragraph of my article in which I have expressed a belief that most cases of reflex paralysis are due to lateral sclerosis with ataxia? I can scarcely believe that he means to lay claim to having originated the idea that circumcision often relieved urinary incontinence and priapism; for Mr. Thomas Bryant, of London, wrote upon this matter about the time when Dr. Shaffer was graduating, and Drs. Sayre and Otis have generally been regarded as the American pioneers in this branch of surgery. Dr. Shaffer advises circumcision for the removal of præputial irritation, but qualifies it by the caution that it be done only for local and directly traceable genito-urinary troubles. My conclusions are: "that operations for the removal of genital irritation may be beneficial even in organic nervous disease: that we should, therefore, remove such genital irritation if it exist in any case whatsoever, and thus give our patients the benefit of the doubt; that operations upon the genitals, even when there be no genital irritation, may prove to be an useful therapeutic measure." Is there any loan of ideas here from Dr. Newton M. Shaffer? The gentleman *does* state that causes for reflex paralysis may be found usually in other organs than the genitals, but he has distinctly stated that this cause is always a lateral sclerosis with ataxia. In my article I reach the conclusion, too, that reflex paralysis, so called, has its cause aloof from the genitals, but I have nowhere mentioned the peculiar sclerotic theory; I have cited various organic diseases which have produced a seeming reflex paralysis; and my postulate is based not upon loose general statements and a case or two of a new disease, but upon a long review of the literature of the subject from the first paper of M. Stanley, in 1833, upon an analysis of all the cases of Dr. Sayre and Dr. Barwell, and upon statements made to me by letter or in person by such gentlemen as Drs. Weir Mitchell, Da Costa, Jacobi, Jewell, Edes, Miles, Webber, Spitzka, Seguin, Kinnicutt, McBride, Hammond, Newton M. Shaffer.

For these reasons I fail to perceive that Dr. Shaffer had "covered" my most important conclusions and many of my points.

But none of us will fail to sympathize with Dr. Shaffer in his lament that other gentlemen should have had the same doubt that he possessed about the genital origin of reflex paralysis; and the only consolation which can be offered to the gentleman is that this doubt was beginning to spread in the profession, and was lurking in the minds of hundreds. It was mainly from the desire of substantiating it with proof that I took up my pen.

To the judgment of those members of the profession who will do me the honor of reading my paper, I think I may safely leave the settlement of the question as to whether I have borrowed from Dr. Shaffer in any other particulars.

One thing more, Mr. Editor, and I am done. I presume that Dr. Shaffer must have read the whole of my article, else he could not know which were my "most important conclusions;" and yet but half of it has been published, the other half remaining for the February number of the *Annals*.

Yours very truly,

LANDON CARTER GRAY, M.D.

BROOKLYN.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 22, 1882, to January 28, 1882.

STERNBERG, GEO. M., Major and Surgeon. Granted leave of absence for one month, and during his absence Surgeon J. C. Bailey to attend the sick at Point San José, Cal., S. O. 9, Middle Division of the Pacific and Department of California, January 16, 1882.

COMEGYS, E. T., Captain and Asst. Surgeon, now stationed at Columbus Barracks, Ohio, to report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and upon completion of examination to return to proper station, S. O. 19, A. G. O., January 25, 1882.

BANISTER, J. M., First Lieutenant and Asst. Surgeon, Fort Reno, Ind. T. Granted leave of absence for one month, S. O. 18, Department of the Missouri, January 24, 1882.

MADDOX, THOMAS J. C., First Lieutenant and Asst. Surgeon. Having reported at these head-quarters in compliance with S. O. 2, C. S., A. G. O., will report to the commanding officer Fort Clark, Texas, for duty, S. O. 6, Department of Texas, January 16, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 28, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Jan. 21, 1882.	0	17	303	8	210	137	40	0
Jan. 28, 1882.	0	10	278	3	202	128	31	0

The American Medical Bi-Weekly has been changed to a weekly. It presents an excellent appearance.

The Sixty-second Annual Meeting of the White Mountain Medical Society was held at Wells River, Vt., January 4 and 5, a large number of members being present. The New Hampshire State Medical Society will print the most important of the papers read.

The officers elected for the ensuing year were: President, Dr. O. L. Watson, of West Topsham, Vt.; Vice-President, Dr. E. Mitchell, Jr.; Secretary, Dr. C. R. Gibson, of Woodville, N. H.; and three directors and six censors.

School Hygiene and Boards of Health.—Our correspondent, Dr. Tuckerman, suggests that the National Board of Health, as well as State Boards co-operate with the Commissioner of Education to secure a general improvement in school hygiene.

Sir Robert Christison, Bart, M.D., the eminent chemist and medical jurist, died recently at the age of eighty-three. His "Treatise on Poisons" was for a long time a standard work.

Consulting Boards to Lunatic Hospitals.—The following petition is before the Massachusetts Legislature:

"That a board of visiting or consulting physicians attached to each lunatic hospital, such as was provided by a bill before the last legislature, would not only give the patients the benefit of additional professional services, but also tend to increase the knowledge of diseases of the brain among practitioners.

"Your petitioners, therefore, solicit the passage of such laws as they have above recommended, and such others as are needed for the protection of the rights of persons really insane, and of all charged with being so."

A Bean the Nucleus of a Calculus.—In the *Rivista de Medicina y Cirugia Practicas* Dr. Bide publishes the curious case of an individual twenty years of age, who had introduced a bean into his urethra, from whence the object passed into the bladder, becoming the nucleus of a calculus, which was subsequently removed by Lithotrity.

Styptic Action of Cat's Hairs.—In a case of rebellious epistaxis occurring in an anæmic girl, Dr. Devtercos was about to plug the nares, when the suggestion was made to introduce a few cat's hairs. This being done, the hemorrhage instantly ceased. Dr. Devtercos has had recourse to this method in other cases, with good results. (!)

Venereal Affections in Guatemala.—According to the *Diario de Centro-America*, an official examination of the public women of Guatemala proved that over ninety-five per cent. of these unfortunates were in bad health.

Sulphide of Calcium in Strumous Ophthalmia is highly recommended by Mr. Simon Snell in *The Practitioner*. It is given in doses of one-tenth of a grain to one-fourth of a grain, three times a day, the usual applications of atropine, poppy fomentations, etc., being employed at the same time.

A Bill to Regulate Pharmacy is before the Kentucky Legislature. It is said argumentatively that the Kentucky doctors ought to be regulated first.

The Church and Scientific Progress.—Rev. Richard Hill, of Stockwell, England, recently delivered a sermon justifying vivisection.

Lister's Treatment of Fractured Patellæ.—Mr. Lister and his colleagues have been for some time treating transverse fractures of the patella by cutting down upon the bone and passing silver wires through holes bored into the separate fragments, the ends of the wires being then twisted together so as to hold the fractured surfaces in close apposition. It was claimed that the operation was (under the spray, of course) without danger, and secured the firmest possible union. I say *was* claimed: for, since in one instance the knee-joint suppurated, we have heard less of the immunity of the operation.—*Corr. Chicago Med. Journ. and Ex.*

The Bacterial Hallucination sometimes presents amusing phases. Not long ago a rigid disciple of Lister made an amputation at the hip. The dressing was applied over the same regions as the ganze of a ballet-dancer. Whenever the patient desired to evacuate his bladder (fortunately it was a 'he') the house-snrgeon or dresser was summoned; the spray was directed so as to shower the patient's torrid zone; the dressing was carefully loosened, the necessary organ was fished up out of the depths and directed over a vessel, and then the gentle gurgle of the escaping renal secretion mingled sweetly with the murmured admiration of the bystanders, the fizz of the faithful spray, and (presumably) the teeth-gnashing of baffled bacteria. Needless to say that the patient died.—Dr. W. T. Belfield, *ibid.*

Vaccinia Following Small-Pox.—Dr. B. G. Bristol, of Webster Grove, Mo., writes that he had smallpox in 1847, since which time he had seen and treated many cases of that disease. As an experiment, a short time ago he was vaccinated with virus from Dr. Higgins's vaccine farm at Manchester, Mo., and two weeks later he had two perfect vaccine-pocks on his arm, each five-eighths of an inch in diameter.

Resection of the Precordial Region.—In a letter to the editor of the *Raccoglitore Medico*, Dr. Federico details a case of precordial resection. The patient was a countryman, aged twenty-five. The soft parts of the precordial region, traversed by various fistulous canals, were removed; the left half of the sternum below the manubrium, and the anterior extremity of the third, fourth, and fifth ribs, with their corresponding cartilages, were resected. Great care was necessary to avoid wounding the pleura and entering into its cavity. The resection completed, the heart, covered by the membranes, was exposed to view. The wound measured thirteen and one-half centimetres in its vertical and sixteen in its transverse diameter. A compress moistened

with carbolic acid solution was laid upon the pleura, the resected surfaces were touched with the thermocautery. The operation occupied two hours and a half; chloroform was used as an anæsthetic, and a modified Lister method employed. For the first few days the patient suffered from pleurisy on the left side. When granulations had filled in a good part of the space skin-grafting was resorted to, using the integument of the right side of the thorax. The patient's further progress was exceedingly satisfactory.

Phthisis and Tuberculosis in Italy.—Statistical data presented by Prof. Sormani demonstrates that phthisis and tuberculosis are relatively less frequent in Italy than in France, Belgium, Austria, Hungary, and Germany, but more so than in England, Switzerland, and Spain. In Italy phthisis and tuberculosis are more frequent in the northern than in the southern cities. The percentage of mortality for these diseases in Belgium, England, and Italy shows a tendency to diminish.

Tayuya as an Antisyphilitic.—The tayuya (Dermophilla pendentica) is a native of Brazil, and is employed by the indigenous inhabitants of that country as a remedy in syphilis. It was introduced into Europe by an Italian naturalist, Ubicini. The root is the most active part of the plant. In Italy two tinctures are made from it: a strong one, known as the mother tincture, employed in hypodermic injections, in daily doses of a gramme; the other a weaker tincture, consisting of a dilution of the former with three parts of alcohol, is preseribed internally, in daily doses of from six to sixty drops. Analysis has demonstrated the presenee of the oxalates of calcium, magnesium, and of iron, a resin, and an uncrystallizable substance supposed to be an alkalcid. The physiologieal effects of tayuya in small doses resemble those of aloes; in large doses it produces diarrhœa, diaphoresis, and salivation. Clinical experiments have revealed in this substance an antisyphilitic remedy of great value and complete innoeuousness.—*Gaz. des Hôp.* and *Gazz. med. de Bahia.*

Sulphate of Cadmium in Corneal Opacities.—Dr. Miguel, of the Belgian army, uses the following solution: Cadmii sulphatis, .05 (gr. ¾), mucil. acaciæ, 10 gram. (ʒ ijss.). With this solution the spot is to be touched several times in twenty-four hours.—*Paris Médical.*

Milk-Sickness.—A comprehensive article upon this, to most physicians, rare disease, is published by Dr. Joseph Spaulding, of Lafayette, Ind., in the *Western Medical Reporter*. The disease has been called "trembles," "tires," "slows," "puking fever," etc. It seems to be peculiar to the great central valleys of the Ohio and Mississippi Rivers. It may, however, be transmitted to persons living at quite long distances from its place of origin, by the butter, milk, and beef of affected animals.

In Dr. Spaulding's opinion the cause was a plant containing a fermentive poison. This plant is distasteful to animals, and only eaten when there is a scarcity of vegetable food. A friend described it as a low vine running underground, and occasionally sending up a stem with leaves.

Symptoms.—Mild eases: they are languid, nauseated, slow pulse, dry, red tongue, cannot eat. Medium severe cases: nauseated, bad breath, dimness of vision, muscular soreness, a general lassitude, perhaps muscular trembling, an entire distaste for food, no fever, pulse slow, surface cool, and feels to the touch waxy. Severe cases: constant retching to vomit, very little thrown up; odor of breath and exeretions exceedingly disagreeable; you can hardly stay near them or even in the room; the stench is so pungent, offensive, you will want a draft of fresh air in order to sit by them a sufficient time to make your examination; the bowels are very costive, so much so that you will let your patient die if you fail in your diagnosis; pulse weak, surface cold and dry, eyes sunken, the salivary glands cease to act, the mouth is dry and red; the fauces are also dry; the passage of the air in respiration sounds as if forced through dry parchment; the gastric mucus becomes less and less, and shortly none is secreted. The liver at first secretes bile, but later no bile is secreted, and to appearance glandular action is entirely suspended, even the bronchial mucus.

A very noticeable feature is the peculiar and offensive odor. The treatment recommended is to stimulate early and late, and to give cathartics early and late. Antiseptics are to be given, if possible—such as creasote. Whiskey is given in very large amounts, from a pint to a quart a day. It acts here almost as in cases of snake-poisoning.

The "Lady Fever."—Dr. J. B. Garrison, of Mentor, Ark., writes as follows (*Western Medical Reporter*) concerning certain urethral troubles in the West: "The title 'lady fever' is the local synonym for a most virulent form of gonorrhœa among the colored residents of this section, and which, fortunately, is comparatively rare when the almost universal promiscuous intercourse of the sexes is taken into consideration. A mild form of clap prevails among the negroes quite extensively, which is generally unnoticed by the female, or considered ordinary 'whites,' and which the masculine element denominates 'runnin' range' (running reins). According to my own observation, as well as that of my medical *confrères*, the *colored clergy* are peculiarly susceptible to its influence. But, be he lay or clerical, *his version* of the *cause* is invariably the same: he 'hurt his back strainin'—liftin' at a heavy log.' In a majority of instanees they are sincere as to their belief in its traumatic origin, since it is irreferable to a source of infection. This variety yields readily and rapidly to internal remedies; copaiba and ol. terebinth., in moderate doses for a few days, with enforced continence for a couple of weeks, being all that is usually requisite for a cure. But woe to the individual on whom the cruel hand of 'lady fever' falls! The initial lesion in the community is readily traced to some flammiferous wayfarer from the city. In the male all the more formidable characteristics of *gonorrhœa virulenta* present themselves, with, in many eases, balano-posthitis, orchitis, epididymitis, with frequent, painful, clonic spasms of the neck of the bladder; and I have seen the urethral discharge so acrid as to excoriate the contiguous integument.

Skimmed Milk Proclaimed Unwholesome. — A milk-dealer named Gray, of this city, was recently indicted by the Board of Health for selling skim-milk at three cents a quart. The Board of Health based the prosecution of Gray on the ground that skimmed milk was not a wholesome article of human food, and that its sale was a violation of law. The defenee, on the other hand, contended that such milk, unmixed with water or any other substance, was a wholesome article of food, and consequently did not come under the head of "adulteration." The ordinance prohibiting its sale they held to be

unconstitutional. In support of their argument the defence examined a number of experts, who testified that milk from which the cream had been removed, unadulterated by any other substance, was not unwholesome. The jury brought in a verdict to the effect that in their opinion that skimmed milk as an article of human food was impure, injurious, and unwholesome. This is certainly a very extraordinary view.

The Treatment of Sea-Sickness.—Dr. Milan Soulé, surgeon on the steamship City of Sidney, has written an account of his experience with the bromide treatment for sea-sickness, as laid down by Dr. G. M. Beard. His testimony to its efficacy is very emphatic and convincing. He says:

"About three years ago I began to use the bromides in treating sea-sickness, following, as nearly as possible, the direction given in Dr. Beard's valuable monograph on that subject. I had then been in the service of the Pacific Mail Steamship Company nearly four years, and as my field for experiment was large, I had tried nearly every drug or combination of drugs that had ever been proposed for the cure or alleviation of this disagreeable malady. Repeated failures and humiliating disappointments had so shaken my faith in the power of drugs over this disease, that I began to use the bromides with a good deal of doubt and hesitation. Greatly to my surprise and gratification, however, I found that I was able to entirely prevent or greatly to alleviate the disease, and have not one single failure to record. The following is the combination I most frequently employed, viz.:

℞. Sodii bromidi..... ʒ iv.
Ammonii bromidi..... ʒ ij.
Aquæ menthæ piperitæ..... ℥ iij.

M. S.—A teaspoonful before meals and at bedtime; begin treatment three days before going on board.

"When preparatory treatment had been neglected and the disease fully established, I put a teaspoonful of the above in a half tumbler of water, add a drop of ext. ipecac. fluid., and give a teaspoonful every five minutes; it generally relieves the patient in less than an hour. I have received several letters (guinea enclosed) from passengers asking me to send them the above formula. Next to the bromides, I have found hyoscyamia the most successful remedy. Atropia will frequently afford relief, but is not altogether safe, as I have noticed a few cases of retention of urine to follow its use. I give nitrite of amyl a fair trial, but it proved a complete failure. I have notes of several cases where the bromides entirely prevented sea-sickness during voyages of from twenty to thirty days, although these patients were always sick on previous voyages."

A Curious Misuse of Terms.—A correspondent from Appleton, Wis., sends us the following amusing and suggestive note: "The vast amount of medical knowledge unexpectedly displayed by the non-professional press during the illness of the late President is now to a great extent a matter of record. As evidence of the singular accuracy of much of this knowledge, I offer the following statements, all of which were taken from the columns of leading daily papers of several large cities: 'Hyparenthesis' was feared, as also was 'hypodralic congestion.' Among the glands affected during the course of the case were the 'salwary conglomerated,' the 'sympathotic,' the 'partoid,' 'parotidid,' 'paratodit,' one of which, it was feared, would 'sulphurate,' while in the case of another, 'supperation' was the expected catastrophe. There were also 'metastalic abscesses,' and others which were 'metallastic' in character, and the 'plexus cosiacus' played an important part, which was also true of 'septicemid' and 'septicemæmia,' 'sceptic matter' was treated by the use of 'permanganesed potash' and 'permanganose potash,' while the vital powers were sustained by the use of 'reptonized enemetics,' and 'liquor nourishment.' Finally, Dr. Bliss gave a reporter his personal assurance that 'President Garfield had not been under the influence of optics for more than a week.'"

Bread Prepared with Sea-Water.—Dr. Sena has faithfully studied the internal administration of sea-water, and asserts its efficacy in scrofula and other conditions of malnutrition, and its utility as a preservative in many other maladies difficult to combat. In order to avoid the objections to administering sea-water as such, it is used in the preparation of bread. This bread is preferable to the ordinary article, is less insipid, and may be kept longer. All the properties possessed by the chlorides and iodides combine to make it at once a hygienic food and a therapeutical agent. The statistical data cited by the author show the results obtained in the Hospital de Nuestra Señora de la Misericordia, at Valencia, one of the finest charitable institutions in Spain, where this species of bread has been adopted. Comparing the number of patients cured after this bread had been made use of, with the number cured the year before, a considerable increase is noticed. Dr. Sena concludes as follows: 1. Bread prepared with sea-water is exceedingly useful in the prevention and cure of scrofula. 2. It possesses the same virtues as the fluid in corresponding doses. 3. It should be used in all charitable institutions near the coast. 4. Bakers of towns so situated should prepare it for use as a hygienic article of diet.—*Cron. Med. de Val.*

Curious Case of Acute Dermatosis.—The patient was a demented individual, without pathological antecedents related to his trouble. He was suddenly seized with a general pruritus, which obliged him to call in a physician. Examination revealed an eruption composed of papular circles surrounded by others formed by agglomerated and transparent miliary vesicles. These patches were as large as a dollar piece, and the skin between them was of a pronounced cyanotic hue. The eruption involved the thorax, neck, and face, but was absent altogether on the abdomen and lower extremities; the latter parts were the seat of pruritus which did not involve the seat of the eruption. A week passed without material change in the condition of the patient, but at the end of this period the pruritus of the extremities ceased entirely, translating itself to the eruptive patches. From this time the lesion diminished in intensity, and on the eleventh day the dermatosis and pruritus had disappeared. The case was reported by Dr. Lucio Lopez, of the Province of Biscay.—*Rev. de Med. y Cir. Pract.*

East River Medical Association.—A reunion of this Society was held at the residence of Dr. James R. Taylor, 234 East Twelfth Street, on Tuesday evening the 31st ult. The members of the Association and invited guests, with their ladies, were given a reception by Mrs. Taylor, and, notwithstanding the inclemency of the weather, the gathering was large. The entertainment was well appointed in every respect, and reflected credit upon one of the oldest medical organizations in this city.

Original Lectures.

NERVOUS DEGENERATIONS AND THE THEORY OF SIR CHARLES BELL.[1]

By JOHN C. DALTON, M.D.,
NEW YORK.

Lecture III.

Mr. President and Gentlemen: It is now a little over forty years since the beginning of an investigation which has produced most important changes in the study of the nervous system. It relates to the alteration of structure taking place in nerves after they have been divided by a transverse section.

The manner in which attention was first directed to this point is as follows: It had long been known that when a nerve was cut at any point the immediate effect was a suspension of its functional activity. If it were a motor nerve which had been divided, voluntary motion was abolished in the parts below; and if a sensitive nerve, there was loss of sensibility in the region where it was distributed. But this interruption of the nervous activity was not always permanent. In some cases the power of motion or sensation would return in the affected parts; and the ends of the nerve were then found to be reunited by a cicatricial tissue, in which there were connecting nerve-fibres of new formation. This reunion of a divided nerve, and the mode in which its structure and functions were re-established, formed the subject of many laborious investigations.

The observations in question were mainly directed to the cicatrix between the ends of the divided nerve. This was naturally supposed to contain the key of the whole secret, and consequently received most of the attention given to the subject. But, in 1839, Nasse[2] extended his examination to the nerve-fibres at a lower level. He divided the sciatic nerve in frogs and rabbits, and, after waiting from two to five months, found that the fibres in the separated portion of the nerve had become altered in structure. They were of irregular form, granular, and semi-opaque; they often contained what seemed to be minute fat-globules, from the degeneration of their myeline; and they appeared to undergo, in this way, a gradual atrophy. Nasse's observations were almost immediately followed by those of Gunther and Schön,[3] which were to the same effect. They were made on the divided sciatic nerve in rabbits, from twelve hours to one year after the operation. They showed that a nerve, after a few days' separation from its nervous centre, loses its irritability, so that its galvanization will no longer produce contraction in the muscles below; and that this loss of irritability coincides in time with the granular degeneration of its fibres.

All these researches were connected with the question of the re-establishment of the nervous continuity, and they did not extend for any great distance below the point of section. Thus far, whenever observers use the term "regeneration," as applied to divided nerves or nerve-fibres, they mean the formation of new connecting fibres in the cicatricial tissue. It was supposed that when this reunion took place, the altered fibres below were restored to their normal condition, the nerve being enabled, in this way, to resume its functions. The fact of degeneration was considered as of secondary consequence, as limited in extent, and often of temporary duration.

But ten years later the subject was taken up afresh by Augustus Waller, and was treated by him in a manner so original and so thorough that it at once assumed a character of the first importance. Waller began his professional life in England, as a practitioner of medicine; but he had a strong taste for independent research, and, after being for a time Professor of Physiology in the medical school at Birmingham, he transferred his residence to the continent, where he remained for most of his subsequent life, and where the greater part of his scientific work was accomplished. For the anatomical study of muscular and nervous fibres he employed the tongue of the living frog. This gave him a great advantage; since the extensibility and transparency of the organ enabled him to examine its internal parts in their normal place and condition, undisturbed by the contact of artificial reagents. He applied this method to the observation of nerve-fibres, and the change which they undergo after division; and thus followed their granular degeneration in the living animal from day to day, under the microscope.

One of his earliest and most important results was, that the degeneration in the fibres of a divided nerve below the point of section, extends through its whole length, reaching to its ultimate ramifications. After division of the glosso-pharyngeal nerve in the upper part of the neck, he saw its degenerated fibres in the tongue, and even in the papillæ of the mucous membrane. He also established the fact, that in a nerve once divided, the degeneration of the affected fibres is final; and that when the nervous functions are restored, it is by a process of regeneration, that is, the growth of new fibres throughout the separated portion of the nerve.

But the principal merit in Waller's discovery was something additional. He did not rest content with its value as an acquisition; he made it serve as an instrument. He saw in the degeneration of divided nerve-fibres a means of investigation, which he at once put to further use. A nerve is often made up of fibres from different sources. It receives branches of communication from other nerves; and in the inosculating filaments between two different trunks there may be fibres going or coming in either direction. In the nervous trunks and branches these fibres are for the most part hopelessly intermingled, and it is impossible to follow them for any distance by ordinary dissection. But by dividing, in the living animal, a nervous trunk or branch near its origin, Waller could afterward trace its degenerated fibres, however erratic their course, or whatever their distribution. He communicated his results to the French Academy of Sciences[4] under the title: "A New Method for the Study of the Nervous System, Adapted for Investigating the Anatomical Distribution of the Nerves."

The first application of the new method was in the frog's tongue. This organ is supplied by two nerves, corresponding respectively to the glosso-pharyngeal and the hypoglossal. After dividing one of these nerves, and allowing time for its subsequent

[1] Being the Second Course of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons, New York. Lecture III was delivered in New York, February 7, 1882.

[2] Archiv für Anatomie, Physiologie und wissenschaftliche Medicin, p. 405. Berlin, 1839.

[3] Ibid., p. 270. Berlin, 1840.

[4] Comptes Rendus de l'Académie des Sciences, tome xxxiii., p. 606. Paris, 1851.

degeneration, Waller could determine the course and destination of all its fibres. He followed them throughout the frequent anastomoses of the two nerves, where the altered fibres could always be distinguished from the normal ones around them; and the two kinds were so different in appearance that, as he expressed it, "there could be no doubt whatever as to the origin of either."

These results were obtained by repeated and accurate experimental investigation, and they have been fully corroborated by subsequent observers down to Vulpian[5] in 1866 and Ranvier[6] in 1878. According to Vulpian, six weeks after the division of the sciatic nerve in a dog, no unaltered nerve-fibres could be found in the muscles of the corresponding foot; and in similar experiments by Ranvier on the rabbit, the terminal ramifications of the nerve in the muscles of the leg contained only nerve-fibres with disorganized and granular myeline.

The advantages in Waller's mode of procedure were so obvious, and so readily verified, that it was soon generally adopted, and received the name of the "Wallerian method." It at once yielded, in the hands of its author, much interesting information. After division of the pneumogastric nerve on one side, in cats, at the level of the larynx, granular degeneration was found throughout its peripheral fibres, except in those joining it below from the inferior cervical ganglion of the sympathetic, which remained normal. Above this junction the nerve was wholly disorganized; below, it contained a mixture of fibres, degenerated and normal. It was thus made evident that the inosculating branches between the two nerves are given by the sympathetic to the pneumogastric, and not by the pneumogastric to the sympathetic.

Physiologists had often been at variance as to the origin and character of the chorda tympani—that remarkable filament of communication between the facial and lingual nerves. Was it a branch of the facial nerve going to the lingual; or was it an offshoot from the lingual returning to join the facial? This point was determined by the method of section. Waller introduced his stilet into the middle ear, and divided the filament where it crosses the membrana tympani. Fifteen or twenty days afterward, nearly all its fibres were degenerated between the point of section and the lingual nerve; that is, in the direction of their peripheral distribution. The chorda tympani was consequently shown to be a branch of communication *from* the facial nerve *to* the lingual.

In this way many doubtful questions of nervous distribution received their solution. The granular degeneration of the divided nerve fibres became an artificial aid to the anatomist, of the same value as the injection of minute blood-vessels with an opaque pigment. Even a single disorganized fibre could be distinguished among a crowd of normal ones; and in a mixture of the two, the numerical proportion of each could be fairly determined.

But Waller did not remain satisfied with this success. He determined to apply the same method to the study of the nerve-roots;[7] and in doing so he opened a new chapter of nervous physiology, and greatly enlarged the field of his operations.

[5] Leçons sur la Physiologie du Système Nerveux, p. 243. Paris, 1866.
[6] Leçons sur l'Histologie du Système Nerveux, tome ii., p. 349. Paris, 1878.
[7] His second communication to the French Academy, in 1852, was entitled, Experimental Researches on the Structure and Functions of the Ganglia. Comptes Rendus de l'Académie des Sciences, tome xxxiv., p. 534. Paris, 1852.

The history of these experiments is so well known that they only need to be stated in a few words. Waller had already shown that if a spinal nerve were divided at its exit from the vertebral canal, all its peripheral parts suffer degeneration. Motor and sensitive fibres are alike involved, and can be traced, in their disorganized condition, to their ultimate termination in the muscles and the integument. On continuing the same mode of investigation within the vertebral canal, if the anterior root only were divided, the motor fibres alone degenerated in the trunk and branches of the nerve, while its sensitive fibres remained normal; if the posterior root were divided outside its ganglion, the sensitive fibres of the nerve degenerated, and the motor fibres were unaffected; and in both cases the portion of the nerve-root still connected with the spinal cord preserved its normal structure. But if the posterior root were divided above the situation of its ganglion, two remarkable consequences followed. First, there was no degeneration of the nerve whatever, outside the ganglion; and secondly, that portion of the nerve-root separated from the ganglion, but still united with the spinal cord, suffered complete degeneration.

These effects were repeatedly observed, under varied conditions, until there was no doubt in regard to them. In the frog, when both roots of a sciatic nerve were divided above the level of the ganglion, there was, of course, complete loss of both motion and sensibility in the paralyzed limb; but while all its muscular nerve fibres degenerated, the sensitive fibres distributed to the skin exhibited no alteration, even at the end of two months. Similar experiments on warm-blooded animals turned out in the same way. In dogs and cats, Waller utilized for this purpose the exceptional position of the second cervical nerve: the two roots of which remain distinct in these animals until after their emergence from the intervertebral foramina. He could thus operate on the nerve-roots without opening the vertebral canal; and by this means he verified Magendie's discovery, that section of the anterior root destroys the power of motion, and that of the posterior root the power of sensibility. But he demonstrated, furthermore, that when both roots are severed above the level of the ganglion, all the motor fibres of the nerve degenerate, and all its sensitive fibres remain sound.

It is therefore evident that the immediate loss of action in a divided nerve, and its structural degeneration, are two independent phenomena, having nothing to do with each other. A motor nerve, when cut, ceases to excite voluntary motion, not because its fibres are incapacitated by degeneration, but because their physical continuity is broken at one point; and a sensitive nerve, under like conditions, can no longer communicate with the sensorium for the same reason. The proof of this is that if we galvanize the motor nerve below the point of section, it at once calls out the action of its muscles; and a like stimulus, applied to the sensitive nerve above its point of section, will be transmitted to the brain and produce the effect of a sensation. This is the state of things immediately after the nerve has been cut.

But at the end of some days a different condition shows itself in the peripheral part of the divided nerve. Its fibres then become unable to react under artificial stimulus, and their galvanization no longer produces muscular contraction. This is due to their progressive degeneration, which requires time for its development, but which at a certain stage de-

stroys the functional activity of the nerve-fibres. Simple paralysis of motion and sensation is consequently the *immediate* result of division of a spinal nerve. Its degeneration, with loss of irritability, is a *subsequent* result. The independence of the two is especially manifest in Waller's experiments on the spinal nerve-roots. When both are divided above the level of the ganglion, the motor fibres of the anterior root become degenerated throughout their distribution in the paralyzed parts; but the sensitive fibres, from the posterior roots, remain everywhere sound in the integument of the same region.

From these facts Waller concluded that the two sets of nerve-fibres had different centres of nutrition; that the motor fibres of the anterior root were dependent, for structural integrity, on their connection with the spinal cord, while the sensitive fibres of the posterior root depended on their connection with the spinal ganglia. He was fully justified in claiming that his results were unequivocal, and "calculated to throw a new light on the relations of the nervous system."

For Waller's communications on this subject to the French Academy he was awarded, in 1856, the Montyon Prize of Experimental Physiology, by a committee consisting of Flourens, Rayer, Serres, Milne-Edwards, and Bernard. In reporting the decision of the committee, the chairman, Bernard, begins with the following words: "The discoveries usually presented to us are of two different kinds. In some, the facts have been already, to a certain extent, anticipated, and are mainly serviceable in their new form by increasing the precision of our knowledge, and by elucidating subjects previously obscure. Those of the other kind, on the contrary, are unexpected. The principal feature in them is their novelty; and they enlarge the boundaries of science, not merely by the solution of particular questions, but still more by the ideas and suggestions which they originate. It is to the last of these two categories that the present essay belongs."

It soon appeared that the committee were not mistaken in their estimate. The immediate result of Waller's researches was the discovery of the so-called "centres of nutrition" for nerve-fibres of different kinds. The existence of these centres of nutrition was fully demonstrated; although it was not quite plain, and has not even yet become so, in what way their influence is exerted. But there was also the additional discovery that the degeneration of divided nerve-fibres may take place in two opposite directions. It may be *centrifugal*, that is, from the point of section to the periphery; or it may be *centripetal*, that is, from the point of section toward the spinal cord and brain. This fact afterward became the most prolific source of further investigation.

Up to this point Waller's experiments had been confined to the spinal-nerves and nerve-roots. In his last communication to the French Academy,[8] he goes a step farther, and traces the course of similar degenerations in the cord itself. He divided the spinal cord, in a dog, between the third and fourth lumbar vertebræ. After twenty days the cord was found to be reunited at the line of section. But above the section the posterior columns were disorganized for the space of about two vertebræ; while in the inferior segment the same columns, as well as the posterior nerve-roots, were normal. The anterior nerve-roots, on the contrary, were degenerated for the first three pairs below the section; and the same alteration continued, diminishing gradually in amount, for the fourth, fifth, and six pairs. Thus there may be, within the columns of the cord, as well as in its nerve-roots, centripetal or centrifugal degenerations, affecting exclusively particular nervous tracks.

This discovery corresponded with certain pathological observations in man, made about the same time by Türck, and communicated by him to the Academy of Sciences at Vienna.[9] They were cases in which post-mortem examination revealed an old morbid deposit in the brain, together with a structural alteration of the spinal cord on the opposite side. This alteration consisted mainly in a production of abnormal granular cells, occupying the tissues of the cord, and resembling those met with about the morbid deposit in the brain. The most striking feature of the alterations in question was that they occupied definite longitudinal tracts, the rest of the cord being normal. By examining successive sections at different levels, it became evident that, from the lesion in the brain to the lower end of the spinal cord, only certain bundles of fibres were affected; and these bundles corresponded in situation with those which could be demonstrated by dissection in normal specimens of the cord, after hardening in alcohol.

Observing this correspondence, in certain cases, between the degenerated tracts and parts already known, the author was led to apply the same means of observation to the study of anatomical relations not so well understood. The attempt proved successful. The first fact which it brought out was a distinction between the anterior and posterior segments of the lateral column. No such distinction can be shown by ordinary dissection; most of the nerve-fibres in both segments running in a direction parallel with each other, and between origins and terminations too distant to be traced. But in some of the cases mentioned, the morbid alteration of the lateral column was found only in its posterior part, the anterior part remaining sound; and this difference was so constant, in sections made at various levels, as to leave no doubt that there must be some anatomical distinction between the two segments of the column, extending through the greater part of its length.

It was also seen, in these cases, that on approaching the upper end of the cord, the degenerated tract shifted its position forward and inward, and, at the medulla oblongata, crossed into the anterior pyramid of the opposite side. Thence it extended upward through the pons varolii, where the distinction was extremely evident, the transverse bundles of the pons being free from alteration, while its longitudinal bundles were deeply affected. It appeared, therefore, that the degenerated tracts had been invaded by a special alteration confined to their own limits, and extending continuously, from the seat of the brain lesion, through the crus cerebri, the pons, and the anterior pyramid of the same side, and thence through the posterior part of the lateral column on the opposite side, to the lower end of the spinal cord.

This showed that there was a longitudinal tract of nerve-fibres, reaching for long distances in the cerebro-spinal axis, and having, so to speak, its own centre of nutrition; and that, when this centre of nutrition was disturbed or disorganized by local le-

[8] Comptes Rendus de l'Académie des Sciences, tome xxxv., p. 301. Paris, 1852.

[9] Sitzungs berichte der Kaiserlichen Akademie der Wissenschaften, p. 288. Wien, 1851.

sion, the subsequent degeneration might extend throughout the tract in question, while others in its immediate contiguity remained sound. The cases observed by Türck were accompanied by more or less hemiplegia; and while the brain-lesion, as well as the degeneration of the pons and anterior pyramid, were, as usual, on the opposite side, that in the spinal cord was on the same side with the paralysis. Everything showed the degenerated portions in the spinal cord to be continuous with the opposite anterior pyramids and their extension in the crura cerebri, and consequently to represent the motor tracts of the cerebro-spinal axis. But while Türck followed the crossing of these tracts at the decussation of the pyramids, he also showed that in certain cases their crossing was incomplete—that is, although the bulk of a degenerated anterior pyramid crosses at the level of the decussation and reappears below, in the lateral column of the opposite side, a remnant of its fibres continue their downward course for some distance on the same side. These direct columns, visible more or less constantly in the cervical portion of the cord, are still known by the name of the "columns of Türck."

But his most important results were those indicating the difference, in anatomical connection, between the anterior and the posterior parts of the lateral column. These two parts were distinguishable from each other by the granular deposit with which one was infiltrated while the other remained normal; and the deposit reappeared with such constancy at the same spot, in successive sections, and crossed so distinctly at the decussation of the pyramids, as to show that it followed the course of an associated bundle of nerve-fibres. As this bundle represented, in the cord, the continuation of the anterior pyramid above, the whole tract, from end to end, afterward received the name of the "pyramidal tract." The first indication of the exact locality of this tract in the lateral columns was derived from the sections of Türck.

The same author made an incidental observation, afterward seen to be very important, in regard to degenerations from local lesion of the cord itself. They were instances of paraplegia from compression or disorganization of the spinal cord at one point. In these cases the portion of the cord above the lesion, while mainly free from granular degeneration, nevertheless contained single degenerated tracts, always identical in situation, extending upward to the medulla and pons. But these tracts were not the same with those found degenerated after a brain-lesion; and the latter were entirely sound in the above-mentioned cases of injury to the cord. If one portion of the spinal cord, therefore, can degenerate in consequence of a lesion situated above it, another, and an entirely different portion, may be affected by degenerations coming from below.

So far, the knowledge of degenerations within the spinal cord had been mainly acquired from pathological observations in man. But, about ten years ago, Goltz, in Strasburg, undertook a series of investigations on the functions of the lumbar portion of the spinal cord, especially with regard to its influence on the sexual and urinary organs. His experiments were performed on young dogs, by dividing the cord transversely at the lower end of the dorsal region, and then preserving the animals long enough to study the permanent effects of the operation. By adopting various improvements in the selection of animals, the operative procedure, and the subsequent treatment, he became very successful. The cord was divided without serious injury to the vertebral column or the external parts. Dogs of the proper age and organization were not dangerously affected by the operation, sometimes taking food within the first twenty-four hours, and generally regaining their natural appetite in a few days. The wounds healed in two or three weeks, and some of the animals were preserved several months, remaining paraplegic, but otherwise in good condition.

This was valuable material for the study of degenerations in the spinal cord, and it was utilized for that purpose by Schieferdecker,[10] the assistant of Goltz, who was already familiar with the history and condition of the animals employed.

On examining microscopic sections of the cord in these cases, the granular degeneration of the pyramidal tracts was recognized. It was present in every instance, and had invariably taken a descending course, from the point of section to the lower extremity of the cord. This portion of the spinal cord, therefore, became altered after section in the same way as a divided spinal nerve, that is, from the centre toward the periphery; and the degeneration of the pyramidal tract, whether it be due to a cerebral lesion, or to compression and transverse section of the cord itself, follows the same direction.

On the other hand, when a similar degeneration takes place in the posterior columns of the cord, it is always ascending. We have now the experience of Charcot[11] to corroborate the earlier assertion of Türck, that such posterior degenerations invariably extend from the point of injury or disease upward toward the brain, and never in a downward direction. By this means the ascending and descending degenerations of the spinal cord were established with the same certainty as the centripetal and centrifugal degenerations of the nerve-roots, and, like them, were shown to occupy separate tracts, easily distinguishable from each other.

These facts greatly increased the confidence of physiologists in the value of degenerations, as indicating the continuity and destination of nerve-fibres. It was evident from the first that a divided nerve-fibre degenerates because of its severance from some special nerve-centre, and, once cut off from this centre, it becomes affected throughout its remaining length. When we see, in the spinal nerves, complete degenerations strictly limited to the ramifications of a single trunk, and similar alterations in the spinal cord equally confined to particular tracts, we can hardly refuse the conviction that these tracts also consist of continuous nerve-fibres following a common direction. Waller's experiments on the nerve-roots show that when such a group of fibres meets a ganglion or centre of gray substance interposed in its course, the degeneration does not pass this point. Either the injured fibres receive a further accession of nutritive energy from the ganglion, or else they terminate in its substance and are replaced beyond by new fibres originating from its gray matter. This gives a special significance to the fact observed by Charcot[12] in regard to disease of the pyramidal tracts. These tracts are manifestly the channels for voluntary motion in the spinal cord. The paralysis caused by either their morbid alteration or their experimental division shows that they are really the paths followed by voluntary motor impulses from

[10] Archiv für pathologische Anatomie und Physiologie, Band lxvii., p. 542. Berlin, 1876.

[11] Leçons sur les Localisations dans les maladies du cerveau et de la Moelle épinière, p. 247. Paris, 1880.

[12] Leçons sur les Maladies du Système Nerveux, tome ii., p. 219. Paris, 1877.

the brain to the anterior nerve-roots. But descending degenerations of the pyramidal tract, however complete in the spinal cord, do not usually extend to the motor nerves or nerve-roots. This is easily explained on the assumption that the fibres of the pyramidal tract terminate in the gray substance of the anterior horn, while those of the anterior root have an origin of their own at the same point. The nerve-root therefore degenerates only when divided beyond its emergence from the anterior horn.

A further study of the posterior columns led to the additional discovery of two different kinds of degeneration, as well as to a distinction between different parts of these columns. Hitherto the morbid alteration of nervous tracts had appeared only as the consequence of a local lesion in either the nerves, spinal cord, or brain, extending upward or downward from its point of origin, as if propagated in certain directions along the natural route of the nerve-fibres. These alterations of structure were, therefore, known as "secondary degenerations," because resulting from some primary affection in a different locality. But it appeared that certain tracts in the spinal cord might also be the seat of primary degenerations, originating within their own substance independently of lesions elsewhere. As these alterations often followed a similar course to those of secondary origin, occupying only their own tracts or systems of fibres, they received the name of "systematic degenerations."

The posterior columns of the cord were liable to both secondary and systematic degenerations. But these two affections occupied different regions, thus showing an anatomical distinction in the posterior column, like that already established between the front and back parts of the lateral column.

In the posterior column of the cord, the inner part, next the median line, is a narrow band, visibly marked off from the remainder in the cervical region by a slight furrow on the surface. This is the *funiculis gracilis*, or the "column of Goll." At the medulla oblongata it diverges from the median line in an oblique upward direction, forming, on the inner border of the restiform bodies, the so-called "posterior pyramids." The columns of Goll are the seat of the ascending degenerations noticed by Türck. When they are affected in this way their alteration extends unbroken from its starting-point often quite to the level of the medulla oblongata, whence it is inferred that they are composed throughout of continuous fibres.

But the remainder of the posterior column is affected by degenerations which have a different form and different results. This portion is included between the column of Goll and the posterior nerve-roots, and forms the outer part of the posterior column. It has not received a distinct name, but is important, owing to its connection with locomotor ataxia. It is regarded as made up of comparatively short fibres, originating and terminating in succession along the cord, for the reason that its secondary degenerations are never propagated to any considerable distance, extending at most only two or three centimetres above their origin. But it is liable to systematic alterations of structure, mainly sclerosis, invading a large portion of its extent; and when such alterations occur they are accompanied by symptoms of locomotor ataxia, never produced by structural disease in other parts. According to the observations of Charcot,[13] the columns of Goll may be completely degenerated without causing any signs of ataxia, while sclerosis of the outer part of the posterior columns is always accompanied by ataxic symptoms, and these symptoms are in proportion to the extent of the degeneration.

Lastly, the anatomical study of nervous tracts, by the aid of secondary degenerations, has been carried into the brain itself. There is already a reasonable certainty of the extension of the pyramidal tracts through the anterior pyramids, the pons Varolii, and the crura cerebri; and the fibres of the crus cerebri are manifestly succeeded by the diverging expansions of the internal capsule and the corona radiata. These expansions are, beyond question, for the most part, means of communication between the cerebral convolutions and the ganglia at the base of the brain, while the fibres of the crus cerebri connect the ganglia with the spinal cord below. But, beside these interrupted communications, are there also direct fibres, running continuously from the motor-centres in the cerebral cortex, through the corona radiata and internal capsule into the pyramidal tract? The centres of motion about the fissure of Rolando might produce their effect, when galvanized, either through the intervention of the cerebral ganglia, or more directly by means of continuous fibres. Such tracts of direct fibres have been sometimes imperfectly recognized in the examination of hardened specimens; but they have never been clearly demonstrated by this method, owing to the complicated interlacement of fibres in the upper part of the internal capsule. Their existence is mainly inferred from the course of descending degenerations in this region. According to Charcot, destructive lesions of the cortex, in the anterior and posterior central convolutions, give rise to degenerations in the white substance, which pass downward through the internal capsule, crura cerebri, anterior pyramids, and lateral columns of the cord. These degenerations may be found without accompanying lesion of the cerebral ganglia; and they are not produced by morbid alterations in other parts of the brain than those about the fissure of Rolando. Similar observations, made during a period of fifteen years, point with much significance to a continuity of fibrous structure throughout this tract. If we remember the uniform progress of discovery thus far made by these investigations, first in the nerves, then in the nerve-roots, then in the columns of the spinal cord and medulla oblongata, it does not seem presumptuous to expect from their further prosecution a corresponding success in the more difficult exploration of the brain.

The study of nervous degenerations has already borne fruit of great value. Like many other researches of similar character, it was at first a matter of purely scientific interest, without any apparent bearing on the treatment or even the pathology of disease. But it has grown in importance with every additional observation, and it is now an indispensable aid in investigating the morbid affections of the nervous system. It has extended our anatomical knowledge far beyond its previous limits. It has demonstrated the existence of nervous connections which could hardly have been detected in any other way. It has shown the relation between certain forms of paralysis and the altered structure of particular nervous tracts, and it seems likely to yield results of still wider application before its capacity is exhausted. It began with the degenerating fibres of a divided sciatic nerve, and it has now reached the intricate region of the white substance of the cerebral hemispheres.

[13] Leçons sur les Maladies du Système Nerveux, tome ii., p. 11. Paris, 1877. Leçons sur les Localisations dans les Maladies du Cerveau et de la Moelle Épinière, p. 259. Paris, 1880.

We will now pass to the second topic for the evening, namely, Sir Charles Bell's theory of the nervous system.

Sir Charles Bell's theory of the nervous system is of so recent a date, comparatively speaking, that its traces have not entirely disappeared from our nomenclature. The student will still find, among the synonymes in some anatomical text-books, such names as the "Respiratory nerve of the face," or the "Superior and external respiratory nerves of Bell." But the system of which these names formed a part has become so obsolete that their former significance is hardly remembered; and even the distinctive features of the theory itself has been forgotten in the discussion of more important topics connected with the nervous system.

Among the eminent medical men of the present century, perhaps none have attracted more cordial admiration than Sir Charles Bell. His earnest and strictly professional ambition, his restless mental activity, his versatility of talent, and his genial and enthusiastic disposition, secured him a rapid success and a position of acknowledged superiority. "Anatomist, surgeon, author, artist, and critic," he taught anatomy by lectures and demonstrations, was the equal of Cooper and Cline in practical surgery, published his magnificent works on the Operations of Surgery and the Anatomy of Expression, illustrated by himself, and created the reputation of the Middlesex Hospital as a centre of medical instruction. When he received the Order of Knighthood, in 1831, at the same time with Herschel, Babbage, and Brewster, he thought more of his companions than of his title. "The batch," he said, "makes it respectable." He always retained a strong attachment to his early friends and family relatives, and to the pleasure and sports of a country life; and if he experienced some disappointment in regard to the success of his scientific opinions, this was fully compensated by his general popularity and his high professional reputation.

Bell's attention was especially attracted to the nervous system in 1807, a few years after his arrival in London, and while occupied as lecturer in a private medical school, established by himself. In his demonstrations he was struck with the apparent complexity of the nervous apparatus, and the difficulty of presenting it fairly to the comprehension of his audience. His mind dwelt persistently on this subject, with a view of reaching some more intelligible arrangement of what seemed so confused and disconnected. His thoughts were first turned to the anatomy of the brain, which, he says, at that time "occupied his head almost entirely."[14] He puzzled over the varied form and structure of the cerebrum and cerebellum, the processes, protuberances, and ganglia at the base of the brain, and the connections and course of the different cranial nerves. He tried to reduce these complicated parts to something like order in his mind, and to divine the secret of their anatomical relations.

This was the origin of his new system in cerebral anatomy; and when once it had assumed a distinct form, it grew in importance and took entire possession of his conviction and imagination. He made it the subject of his lectures, and speaks of it in his correspondence with the greatest enthusiasm. "I hinted to you," he says, in a letter to his brother in Edinburgh, "that I was *burning*, or on the eve of a grand discovery." "I really think this new anatomy of the brain will strike more than the discovery of the lymphatics being absorbents." "My object is to lecture it, to make the town ring with it, as it is the only new thing that has appeared in anatomy since the days of Hunter, and, if I make it out, as interesting as the circulation or the doctrine of absorption."[15]

Up to this time there is no trace of any experimental investigations by Bell in regard to this subject. His system was wholly inferential, and based on the visible facts of anatomical structure. But a year or two later he felt the necessity of making some experiments, especially as he had formed the intention of printing his views in a pamphlet for private distribution. He hoped by this means to elicit the opinion of the representative men of the profession, and to see whether his innovations would be likely to meet with approval.

Accordingly, in 1810[16] he records having made two experiments, with a satisfactory result; so much so that he believes he is now about to establish his system on facts "the most important that have been discovered in the history of the science;" and in 1811 his essay was printed, under the title, "Idea of a New Anatomy of the Brain; submitted for the Observations of his Friends, by Charles Bell, F.R.S E."[17]

The idea developed in this essay, and the importance attached to it in the mind of its author, can be best understood from Bell's own account of its origin and growth. In a letter to his brother a year before, he details his plan of investigation and the object to be accomplished. He had already reached the conviction, on anatomical grounds, that the several divisions of the encephalon were different from each other in function; and especially that a wide distinction of this kind existed between the cerebrum and the cerebellum. But how gain access to these deep-seated and vascular parts, so as to experiment upon them? This seemed too difficult an undertaking. It might be possible, however, to expose for that purpose the spinal cord and its nerve-roots, and this is what he accordingly did. "It occurred to me," he says, "that, as there were four grand divisions of the brain, so were there four grand divisions of the spinal marrow: first, a lateral division, then a division into the back and fore part. Next it occurred to me that all the spinal nerves had, within the sheath of the spinal marrow, two roots, one from the back part, another from before. Whenever this occurred to me, I thought that I had obtained *a method of inquiry into the functions of the parts of the brain.*"[18]

That is to say, experiments on the anterior columns of the spinal cord, or the anterior nerve-roots, would throw light on the functions of the cerebrum, with which they were anatomically connected. Experiments on the posterior columns of the cord, or the posterior nerve-roots, would indicate the function of the cerebellum, to which, he thought, these parts belonged.

These are the experiments described in the "Idea of a New Anatomy of the Brain," and this is the meaning attributed to them by its author. He found that irritation applied to the anterior part of the spinal cord produced contraction in the voluntary muscles, while a similar injury inflicted on its posterior part did not do so. On laying bare the roots of the spinal nerves, he could cut across the poste-

[14] Letters of Sir Charles Bell. Selected from his correspondence with his brother, George Joseph Bell, page 117. London, 1870.

[15] Ibid., pp. 117, 118.

[16] Ibid., p. 170.

[17] Reprinted in the Journal of Anatomy and Physiology, vol. iii., p. 153. Cambridge and London, 1869.

[18] Letters of Sir Charles Bell, p. 170.

rior fasciculus without convulsing the muscles; but touching the anterior fasciculus at once produced convulsions. "Such were my reasons," he says, "for concluding that the cerebrum and cerebellum were parts distinct in function, and that every nerve possessing a double function obtained that by having a double root."[19]

The distinction made by Bell between the two divisions of the encephalon is this: The cerebrum is the organ of the mind, of conscious sensation and volition. Consequently the anterior roots of the spinal nerves, being connected with the cerebrum through the anterior part of the spinal cord, are subservient to sensation and volition, and when artificially irritated cause contraction in the voluntary muscles. The cerebellum, on the other hand, presides over the secret or unconscious operations of the bodily frame, as in the vital action of the internal organs; consequently, irritation of the posterior columns of the cord, or the posterior nerve-roots, has no perceptible effect on the voluntary muscles. A spinal nerve accordingly possesses two roots, because it performs two sets of functions: one, those of consciousness and volition, derived from the cerebrum; the other, those of unconscious vital influences, derived from the cerebellum. The cranial nerves, however, have for the most part only a single root, and exercise but one set of functions, corresponding to their place of origin. Thus, "the eighth nerve (par vagum) is from the (back) portion of the medulla oblongata, which belongs to the cerebellum; the ninth nerve (sublingual) comes from the (front) portion, which belongs to the cerebrum. The first is a nerve of the class called *vital* nerves, controlling secretly the operations of the body; the last is the motor nerve of the tongue, and is an instrument of volition."[20] This is the substance of the views contained in the essay of 1811.

Bell was much disappointed in the impression produced by this pamphlet. It turned out an "unpropitious experiment," for it "excited no criticism, and threatened to stifle the enthusiasm of the author." Bell himself says regretfully that this announcement, from which he expected so much, "failed to draw one encouraging sentence from medical men." But we can hardly blame them very much for this apathy. The systematic ideas of the author, however attractive to himself, might not have the same interest for others; and his experimental proofs were certainly insufficient to command belief on their own merits. Indeed, we now know that they do not really bear the significance which he attached to them. The anterior and posterior nerve-roots are not connected respectively with the cerebrum and cerebellum, and we cannot use them in our experiments to determine the separate functions of the brain. It was, no doubt, a suspicion of this physiological *non sequitur* that prevented the profession at large from appreciating the pamphlet as its author had hoped.

But, notwithstanding this temporary discouragement, Bell afterward returned to the subject with new vigor, and soon came to regard his former work as only the introduction to a more extended system. In his first essay, the anatomy of the brain was the main subject of research, the nerves and their distributions being only secondary; but in his theory, as afterward developed, the nerves and their distributions occupied the prominent place. This matter, in 1814, was already, he says, "ripening in his head;" and in his lectures on the nerves for that year he promises to "lay open a fine system." Like his anatomy of the brain, this new system increased in importance the more he thought about it. Year by year he enlarged its proportions, and seemed to anticipate from it greater results than ever. He gradually brought it into the form of a series of communications to the Royal Society. In 1819 he regarded it as nearly complete, and fully worth the labor it had cost, containing, as he believed, the materials of a grand system, destined to "revolutionize all we know of this part of anatomy more than the discovery of the circulation of the blood." By the time the first paper was ready for presentation he was abundantly satisfied with it, and declared that he had made "a greater discovery than ever was made by any one man in anatomy."

In this communication,[21] Bell presented the main principles of his new arrangement of the nervous system, with special reference to the nerves of the face. The paper had been prepared by its author with much care, and he offered it to the Royal Society as the result of several years of thought and investigation.

This time, he had no reason to be disappointed, as the essay attracted everywhere attention and approval. In speaking of a reception which he attended soon afterward, "My paper," he says, "has done me as much good as if I had bought a new blue coat and figured French black silk waistcoat. One gentleman called it the first discovery of the age." He received a number of complimentary letters in regard to it, which, he says, were enough to show that he was "not a visionary" on the subject. "It will hereafter," he adds, "put me beside Harvey."[22]

This paper of 1821 well deserved the praise bestowed upon it, for it contained the announcement of Bell's most lasting and undisputed discovery, namely, that the facial nerve, or *portio dura* of the seventh pair, was not a nerve of sensibility, but a channel for muscular action and the nervous medium of expression in the face. The importance of this discovery, both scientific and practical, was abundantly manifest; and it was sustained by direct and satisfactory experiments on the living animal, as well as by observations on man. It is evident that Bell did not get at the whole truth in regard to this nerve, for he represented its action as limited to the involuntary movements of respiration and expression, and considered the voluntary motions of the face and lips as still provided for by the fifth pair. But it is very seldom that all the details of so complex a subject are mastered by one person or at one time, and the primary facts of the motor character of the facial nerve and its insensibility, as contrasted with the extreme sensibility of the fifth pair, were then fully established on incontestable evidence.

Bell, however, was much more interested in the general plan of his new classification than in any of its details, which he valued mainly as illustrations or proofs of his system as a whole. He continued to develop this system in a series of papers addressed to the Royal Society, and it was afterward embodied, with some necessary modifications, in his "Nervous System of the Human Body," published in 1830.

Bell's conception of the arrangement of the nerves was this: All the nerves of the cerebro-spinal system were divided into two great classes or groups. The first group was that of the *regular, original*, or

[19] Reprinted in the Jour. of Anatomy and Physiology, vol. iii., p. 161.

[20] Ibid., p. 162.

[21] Philosophical Transactions of the Royal Society, page 398. London, 1821.

[22] Letters of Sir Charles Bell, p. 272.

symmetrical nerves, namely, the thirty-one pairs of spinal nerves and the fifth pair of cranial nerves. All these nerves arise by two roots, on one of which is a ganglion; they pass out regularly to successive divisions of the body; they are all subservient to voluntary motion and common sensibility; they are distributed to every part of the frame, but are symmetrical and simple in their arrangement. The second group was made up of the *irregular* or *superadded* nerves. These do not arise by double roots, and have no ganglia at their origins; they come off from the sides of the medulla oblongata and upper part of the spinal cord; and, instead of being distributed in regular order to successive parts of the frame, are sent to remote organs, which they combine in functional activity. They therefore have the character of being superadded, for a special purpose, to the original system of regular nerves. They constitute the great group of *respiratory nerves*, which are distributed to a variety of organs, and, instead of going out on each side straight to their destination, often pass through the body in a longitudinal or oblique direction. They are:

First.—The facial, portio dura of the seventh pair, respiratory nerve of the face.

Second.—The glosso-pharyngeal nerve, distributed to the tongue and pharynx.

Third.—The par vagum, or pneumogastric, the nerve of the lungs, heart, and stomach.

Fourth.—The spinal accessory, or superior respiratory nerve of the trunk, distributed to the sterno-mastoid and trapezius muscles.

Fifth.—The sublingual, or the nerve of articulation.

Sixth.—The phrenic, or great internal respiratory nerve.

Seventh.—The long thoracic, or external respiratory nerve of the trunk.

Eighth.—The fourth nerve, or patheticus, distributed to the superior oblique muscle of the eyeball.

These are the nerves which produce the appearance of irregularity or confusion in the nervous system; because they often cross the track of the symmetrical nerves, and are distributed to organs already supplied by them.

This last fact gives the key to the functional peculiarity of the superadded nerves. According to Bell, an organ which performs only a single function has but one nerve supplied to it; and whenever an organ receives nerves from two or more sources, it is because it performs as many different functions. This explains why certain muscles, like the sterno-mastoid and trapezius, already supplied with nerves from the regular or symmetrical system, also receive branches from the respiratory system. The former nerves enable them to execute the ordinary acts of voluntary motion; the latter bring them into occasional involuntary unison with the act of respiration. This is illustrated in a still more striking manner by the two nerves distributed to the face; namely, the fifth pair, supplying the face with sensation and voluntary motion,[23] and the facial nerve, or seventh, a superadded nerve, which controls the involuntary motions of the face in breathing,[24] or, as he says, "when the muscles of these parts are in associated action with the other organs of respiration."

The respiratory nerves, however, come into play not only in the motions of respiration proper, but in all those connected with the entrance and exit of air from the lungs; as in speaking, singing, coughing, gasping, or sneezing. They are also the agents in all movements of expression, or the emotional affections of the frame. This is especially marked in the seventh pair, which regulates the involuntary changes of expression in the face. But it applies also to the manifestations of emotion in other parts; as in the hurried respiration of anxiety, the retardation or quickening of the heart, and the sobbing of the diaphragm in grief, excitement, or depression. Under every strong impulse the central organs of respiration are stimulated or disturbed, and thus bring into associated action all their subordinate parts, as organs of expression.

Besides this, the nerves of respiration, wherever they may be, have more vitality than other nerves; for the movements connected with this function continue to be performed after all manifestations of sensibility and volition have disappeared. Thus these nerves form a great system by themselves, distinguished from the ordinary or regular nerves by their mode of origin, their functions, their distribution, and their vitality.

Evidently there was much of real value in these observations. They placed in strong relief the fact of associated respiratory motions. The expansion and collapse of the nostrils or lips accompanying the action of the thorax, are occasional in man, constant in some animals, and always increase in proportion to the intensity of respiration. They are truly respiratory motions, as much so as those of the diaphragm. The sterno-mastoid and trapezius muscles are also brought into action whenever breathing is impeded or laborious. The classification which Bell constructed on this basis and illustrated with so much ingenuity has a certain charm about it, and is plainly marked with the talent and originality of its author. But, even as a system, its joints do not all bear inspection, and it contained from the outset certain defects, which became, after a time, plainly perceptible.

Bell showed by his experiments and observations that the seventh nerve controls the involuntary motions of expression and respiration in the face, and that these motions are abolished by its division or injury. If he had accepted this fact at its own value, and had assumed nothing further, he would have been secure; but he believed, in accordance with his system, that these involuntary movements were the only ones under control of the seventh nerve, and that sensibility and volition were provided for by the fifth pair. This idea influenced his mind to such an extent that he was led to conclude, after division of the fifth pair alone, that the voluntary movements of the lips were paralyzed, while those of respiration continued.[25] Magendie, on the other hand, who believed in nothing but direct experiment, soon afterward repeated this operation on the fifth pair, and declared that he could not perceive any paralysis of the lips produced in consequence.[26] We now know that he was right, and that the fifth pair does not animate any of the superficial muscles of the face. That being true, according to Bell's principle there ought to be *two* other nerves distributed to this part—one for its voluntary, the other for its respiratory functions. But, in fact, it has only the seventh pair, which serves for both.

Bell's classification of the respiratory nerves, with regard to their origin, is by no means perfect in its

[23] Philosophical Transactions, 1821, pp. 410, 411, 413, 417; and 1822, p. 284.

[24] Ibid., 1821, pp. 406, 410, 414

[25] Ibid., 1821, p. 413.

[26] Journal de Physiologie, tome i., p. 387. Année 1821.

details. These nerves were said to differ from the others in having no ganglia at their roots, and in originating from an intermediate tract on the sides of the medulla and spinal cord. But both the pneumogastric and glosso-pharyngeal nerves have ganglia at their roots, which are as real, though not quite so conspicuous, as the Gasserian ganglion of the fifth pair. Again, the origin of nerve-roots, in a nearly continuous line from the lateral tract of the medulla and spinal cord, is certainly a marked feature in the glosso-pharyngeal, pneumogastric, and spinal accessory nerves. On the other hand, it cannot be asserted, with any plausibility, of the facial, sublingual, and patheticus.

The last-named nerve was associated with the respiratory system, because it was regarded as causing the upward rolling of the eyeball in involuntary movements and emotional expressions. Everything connected with the subject had, for Bell, a great attraction. His book on the Anatomy of Expression was his earliest publication in London, and first called attention to him as a man of ability. He gave lectures on the same topic to professional artists; and the exercise of his talent in painting and modelling was always for him a source of pleasure in connection with his anatomical pursuits. This probably accounts for the rather forced amalgamation, in his theory, of the functions of respiration and expression.

But how does it happen that Bell omitted from his respiratory system the *intercostal* muscles and their nerves? One would think they had some claim to be considered as part of this great apparatus. They are constantly at work, and keep time with the diaphragm and lungs more steadily than any other outlying organs of respiration. But the intercostals are part of the regular symmetrical system of nerves, originating from the spinal cord, with double roots, and all the other features of their class. The author ignores this difficulty almost entirely, or alludes to it only so far as to surmise that the branches of these nerves which influence respiration are, "in all probability," derived from the same lateral tract of the spinal cord.[27] But there is not the least evidence adduced in support of this probability, and the assumption looks very much like reasoning in a circle.

The controversy once carried on as to the exact significance of Sir Charles Bell's doctrine and discoveries was due, in great measure, to the singular obscurity of his style and his indefinite manner of statement. These defects were habitual with him as a writer, and in many instances are extremely marked. There are few pieces of harder reading than the preface and introduction to his "Nervous System of the Human Body."[28] In attempting to account for this obscurity, the reader is sometimes left in doubt whether Bell really has any distinct idea to communicate, or whether he voluntarily stops short of its complete expression. One of these puzzling passages is the following. After speaking of the par vagum and the spinal accessory nerve, he says (page 47): "Directed in the next place to the portio dura, I wished to answer the question, Why does the nerve which supplies certain muscles of the face take an origin and a course different from the fifth nerve, destined to the same parts? *Guided by these considerations in my experiments, by inference I concluded* that, on cutting across this nerve, all the motions of the face connected with respiration ceased, and that it had the origin we see and took its course with the respiratory nerves, because it was necessary for the association of the muscles of the nostrils, cheek, and lips with the other muscles used in breathing, speaking, etc." It is certainly impossible to determine, from the phrascology of this sentence, whether it contains the statement of an experimental fact, or is only the expression of a hypothetical surmise.

Having enumerated, again, the various organs of respiration, he says (page 49): "It appears, then, that it is the distance and irregular position of the eye, nostril, mouth, throat, and larynx, and muscles of the neck which require these diverging and apparently irregular nerves, to connect them with the act of respiration, and without which they would have possessed no more attributes than the nerves of the limbs—that is to say, sensibility and motion."

There is nothing in the context to indicate from what point the eye, nostrils, mouth, throat, and larynx are "distant," or why they should be considered as more "irregular" in position than the limbs.

One of the most curious instances of this peculiarity is a passage in one of Bell's earlier letters, describing his new system of the anatomy of the brain, and I think it hardly probable that any one now present will be able to understand exactly what he means by it. "I consider," he says,[29] "the organs of the outward senses as forming a distinct class of nerves from the other. I trace them to corresponding parts of the brain, totally distinct from the origins of the others. I take five tubercles within the brain as the internal senses. I trace the nerves of the nose, eye, ear, and tongue to these. Here I see established connections. Then the great mass of the brain receives processes from these central tubercles. Again, the greater mass of the cerebrum sends down processes, or crura, which give off all the common nerves of voluntary motion, etc. I establish thus a kind of circulation, as it were. In this inquiry I describe many new connections. The whole opens up in a new and simple light: the nerves take a simple arrangement; the parts have appropriate nerves; and the whole accords with the phenomena of the pathology, *and is supported by interesting views.*"

This indefinite style of expression extends, as in one of the passages just quoted, even to the description of experiments and their results. It is usually thought essential in reporting experiments, especially if bearing on new questions in physiology, to state all the particulars, so that the reader may form for himself some estimate of their value. Bell habitually neglects this useful precaution. He generally omits all mention of the details of the operative procedure, often that of the species of animal employed, and sometimes even whether it were living or dead at the time of the experiment. The consequence is that doubts have been entertained on these points, in regard to some of his most important investigations.

The truth is, Bell had no real faith in experimentation as a source of knowledge. He preferred to make his deductions, in the first place, from the details of anatomical structure; employing experiments afterward to "prove" or "confirm" them, or to impress his convictions on the minds of others. This is abundantly evident from his own express

[27] Philosophical Transactions, 1822, p. 287.
[28] First edition. London. 1830

[29] Letters of Sir Charles Bell, p. 117.

declaration in various parts of his works, as well as from the method he pursued in originating and carrying out his plans of investigation. With him the conception of a system was the beginning and the end of the mental process; its experimental evidence was only an intermediate episode. For this reason, Bell would hardly be considered at the present day as a physiologist. Indeed, he never speaks of himself as such, but always as an "anatomist," whose whole pleasure is in "investigating structure;" and even his new doctrines and ideas he expressly designates as "discoveries in anatomy."

This explains, in some degree, his undue estimate of the two methods of inquiry. He had so high a regard for the results of anatomical research, that he believed them capable of also solving questions in physiology. Already in 1808, three years before printing his "Idea of a New Anatomy of the Brain," he "is sure," he says, "that he is correct;" and that was before he had made a single experiment. And long afterward he declares that the "few experiments" which he has made "were directed only to the verification of the fundamental principles on which the system is established." But the result of this method has been exactly the reverse of what he anticipated. The experimental observations, which he undervalued, form the only part of his system which has remained; while the attractive and harmonious classification, which he constructed with so much ingenuity on the basis of anatomical deduction, has now lost its importance and almost its place in medical literature.

The value of the experimental method in medical science cannot be measured by the direct results of any particular discovery. It is true that these discoveries are often of great importance, and increase largely the fund of our medical knowledge. They possess, moreover, a vitality which distinguishes them in a marked degree from the ephemeral products of scientific hypothesis. When a hypothetical system has served its time, it disappears and is replaced by a different one; but the knowledge derived from experiment remains serviceable long after its novelty has passed away. The experimental observations of Galen on the recurrent laryngeal nerves and on the functions of the arteries as blood-vessels are as conclusive now as when he first made them, and retain at this day their full value. They have lasted for over seventeen centuries, and have survived during that time all the fluctuating medical systems of solidism and fluidism, of animism, vitalism, archeism, and iatro-mechanism. The information which they imparted was a reality, and is neither destroyed nor impaired by the lapse of time.

But the benefits of an experimental discovery extend far beyond its immediate limits. When a new fact has been established in anatomy or physiology, it is impossible to say what bearing it will have on other facts not yet discovered; and in the history of medicine there are many instances of curious observations which remained imperfect and apparently barren until subsequent discoveries invested them with an unexpected importance. It is evident that Galen's detection of the arterial blood-current in the second century was a necessary preliminary to Harvey's complete discovery of the circulation in the seventeenth; and the lymphatic vessels, discovered in 1651, were thought to be the agents of a slow and insignificant absorption until Colin found, two hundred years later, that the daily quantity of fluids passing through the thoracic duct was from four to ten per cent. of the entire bodily weight. It is almost certain that a genuine investigation, however isolated at first, will produce, some time or other, its legitimate fruit. But, to secure this object, there is one essential requisite, and that is that experimental research be followed and cultivated for its own results, whatever they may be, without demanding immediate returns of a kind that can be designated beforehand, and with entire confidence in the substantial value of this method, which has always been and always will be the only source of permanent improvement in medical science.

Original Communications.

NO BACTERIA IN DIPHTHERIA.

By ROLLIN R. GREGG, M.D.,

BUFFALO, N. Y.

I DESIRE to call the attention of the profession to a few points in connection with bacteria, which have not had the consideration that they ought, or, indeed, which have never hitherto received any consideration from the profession. They are as follows:

First.—There is not the slightest difference to be found recorded by the best observers, between the three classified forms of so-called bacteria in diphtheria, namely, spherical, rod-like, and spiral, and the three exactly corresponding forms of coagulating fibrin, namely, granular, thread-like, and spiral. Spherical bacteria, so-called, are exactly like the molecular granules of fibrin, or the particles which the latter always first organizes into when it begins to coagulate. Rod like bacteria are exactly like the threads or fibrils of fibrin, formed by the union of its granules into fibrils, in the next step in its coagulation; and spiral bacteria are exactly like the spirals into which the fibrils of fibrin always contract when the clot of blood contracts, and into which they contract when they organize into false membranes in connection with any inflammatory disease, unless said fibrils secure attachments of their ends that hold them straight. And yet, no observer of these assumed bacteria appears ever to have stopped for a moment to consider whether his alleged bacterial forms might not be the long and well-known forms of coagulating fibrin, which are always found existing in the same positions and under precisely the same circumstances that bacteria are said to be found in diphtheria.

Second.—Wherever blood congests as a result of disease or other cause, there the fibrin very soon commences to coagulate, first into granules, then these join together to form fibrils, and the latter contract into spirals, unless prevented by the attachment of their ends as just stated.

Lehmann, vol. i., p. 312, says, in speaking of the coagulation of fibrin under various circumstances: "The same process goes on *within the vessels* of the *living organism* as soon as the *blood ceases to circulate.*"

Wood, "Practice of Medicine," vol. i., p. 28, says of the exudation and organization of fibrin in connection with inflammation: "As it first escapes it is a homogeneous, formless, transparent fluid; but very soon afterward, if examined by the micro-

scope, it is found to contain *multitudes of fibrils*," and "*great numbers of minute granules* of different sizes." (The italics in both quotations are my own.)

Third.—Hence, as will be seen, we have the proof from Lehmann, that wherever the blood stagnates, —as it always does under established congestion or inflammation—there is where the fibrin of the blood commences at once to coagulate; and the proof from Wood that those parts where all observers say their bacteria are found in the greatest profusion —namely, in all congested and inflamed parts—are the very parts where the granules and fibrils of fibrin are found in the greatest profusion; only Wood ought to have referred to the granules first and the fibrils last, instead of the reverse, to have had his description conform to the fact exactly as it occurs.

Fourth.—Therefore, those who make the *unnatural* claim of the presence of bacteria, or *vegetable* organisms in the same parts where the exactly corresponding forms of fibrin develop rapidly and in *great numbers*, must show us the clearest distinctions between these two sets of forms, and wherein they differ, also something of the proportions of each in the part, or they must wholly withdraw their unnatural claim, and allow the natural fact to take its place. Some allowance must certainly be made for the existence and presence in congested parts of these forms of fibrin in every case of diphtheria (which has never yet been done) before we can understand the disease fully and scientifically.

Fifth.—Fibrin is always in excess in the blood in diphtheria, and all the false membranes of the disease are composed of fibrin. So, also, are all the heart-clots, or thrombi and emboli of diphtheria composed of fibrin. Then, if all the so-called bacteria of diphtheria, also, are nothing but coagulated particles of fibrin, in the successive steps of its organization to form the false membranes, and if all thrombi and emboli are the same, we see what a simple solution we have of all these hitherto great mysteries. In more concise language, bacteria, heart-clots, and the false membranes of diphtheria are all one and the same thing, namely, fibrin; bacteria being the different stages of fibrin coagulating from the fluid into the fibrillar form; heart-clots being the fibrils of fibrin entangled and interlaced with each other into a mass in the heart, something as they form in a clot of blood outside of the body; the false membranes of diphtheria being fibrin organized into more or less dense membranes, as it always does organize when extravasated upon an inflamed surface.

Sixth.—Fibrin cannot fibrillate into false membranes, or form thrombi without forming first into granules, and these granules joining into threads or rods. Therefore, we certainly must have the granules and threads of fibrin in and about all false membranes, and also in the blood, or we could have no false membranes and no thrombi. The granules and threads of fibrin being exactly like the corresponding forms of the so-called bacteria, and occupying the same positions as already stated, the place where the latter are asserted to begin their growth or development—that is, in or upon congested and inflamed surfaces—is taken possession of in advance by the organizing fibrin; so there is no necessity for accounting for said forms in any other way, and certainly not for calling them bacteria.

But this does not complete all that I desire to say here upon this subject of bacteria. Recently, when reading an extract from a lecture by Professor H. C. Wood, of Philadelphia, I fell upon this paragraph: "The membrane from an affected throat bears everywhere the appearance of little balls about the size of blood-corpuscles, either singly or in groups of four or more. When the blood is examined the white blood-cells are found to contain these micrococci moving about to the number of forty or fifty in each cell, which gradually melt down." And this: "By careful study and experiments, both in human beings and the lower animals, it was found that this infinitesimal plant fastens upon the white corpuscles, and multiplies its cells, altering their character until, with the interior destroyed, they burst, and the plants, set loose in an irregular mass, separate and go off individually, to continue the destructive work on other corpuscles. Thus increased, they poison the blood, choke the vessels, and are found in myriad numbers in the spleen and bone marrow, where the blood is manufactured."

Now, from a most careful study of the nature and demeanor of blood-corpuscles under all circumstances, which study has continued through a period of twenty years, I feel confident that the "micrococci," to the "number of forty or fifty," which Prof. Wood says he saw in each white blood-cell, were nothing more nor less than the *granules* which *naturally* constitute every white blood-cell; and that the "little balls about the size of blood-corpuscles," which he describes and says "the membrane from an affected throat everywhere bears," were simply red blood-corpuscles which had been *decolorized* by the inflammatory and suppurative processes, and thereby distended from their natural disc-shape to the globular form, and thus brought to the appearance of little balls without color.

Certainly, all white blood-cells are constituted of granules to the number of forty to fifty or more in each cell, which any one may see pictured in Fig. 12, Plate II., at the close of vol. ii., "Lehmann's Physiological Chemistry." And it is just as certain that many of the red blood-corpuscles, congested in the parts or vessels under diphtheritic membranes, are *decolorized* by the inflammatory process, and are thereby made viscous, or sticky, so that they readily adhere together in groups.

Red blood-corpuscles, too, when decolorized, and then shrivelled by the heat of inflammation, or by removal to the plate of the microscope, also present the appearance of being nothing but a mass of granules. For an illustration of this fact I would refer the reader to Fig. 65, p. 215, "Virchow's Cellular Pathology," edition of 1863, by J. B. Lippincott & Co., where this author pictures "a few granular decolorized blood-corpuscles" that "have become evident," after a mass of "inspissated hemorrhagic pus" had been "treated with water."

Virchow also gives a fine illustration of the granular structure of white blood-cells in Fig. 59, p. 185, of the above-named work.

Thus, it may be seen that both the white and decolorized red blood-corpuscles are constituted almost wholly of granules; and that the "micrococci" seen by Prof. Wood in the white blood-cells, etc., were no doubt the natural granules constituting said cells.

Other authors also speak of large "bacterial cells," like those described by Prof. Wood, and refer to them as "parent-cells" generating and filled with micrococci, which finally burst, or expel their brood, when the latter, as both they and Wood say, seize upon and destroy many of the blood-corpuscles, and much besides that they come in contact with.

But these observers were all evidently deceived, for they were no doubt simply looking at and describing white blood-cells and decolorized red blood-cells and their granules, and nothing else; while the claim that the latter, or these granules, seize upon or destroy blood-globules or other structures, would seem to be an imaginary and gratuitous assumption.

That the decolorized blood-globules burst, or "melt down," and release their component granules, is true, because they are now dead cells and undergoing disorganization, that is, disintegrating into the granules of which they are made, like all other organic structures undergoing decay; but that they have the power to seize upon living tissues or bodies and devour them is wholly imaginary, though, when stagnated under congestion, until they become putrid, they may then, and often actually do, poison other tissues and structures, and even the whole system to a serious extent. Lehmann says of globulin, of which, as all know, the blood-globules are in great part constituted: "It decomposes and becomes putrid much more readily than the other protein compounds." And when these granules, and the decolorized blood-corpuscles as well, stagnate under congestion, they soon become putrid, and may do much harm in that way, or even cause septicæmia; but they do not and cannot seize upon and devour other structures in the sense taught.

And this brings us to another quite important point, in a scientific sense at least, for a proper understanding of the true pathology of diphtheria in all its bearings. I allude to the fact that no observer of diphtheria, whether microscopic or otherwise, has ever hitherto pointed out, or apparently even recognized the distinction that exists and should be made between the *granules* into which decolorized and disintegrating blood-corpuscles break up, in all congested, or especially suppurating parts, in diphtheria, and the molecular granules into which fibrin first coagulates, in all such parts. No distinction, I repeat, has ever hitherto been pointed out between these two sets of granules, and yet both are certainly present in every such diseased part in every case of diphtheria, and both are also present to a greater or less extent in the general circulation in all *severe* cases of the disease. And they are not only different in themselves, but very different in all their consequences, which also should and must be discussed and understood—the granules of fibrin leading directly and rapidly on to the organization of false membranes, and also to heart-clots or emboli, while the granules of decolorized and disintegrating blood-corpuscles lead to suppurations or putrid ulcerations, and possibly to septicæmia, but *never* to false membrane.

We therefore find, on viewing this subject from the standpoint of nature's great simplicity in all things, that all the pathological or unnatural forms present in and about the membranes of diphtheria, in all congested and inflamed parts, and in the blood, which have been miscalled vegetable parasites under such a multitude of confusing names, and to which have been ascribed so much malignancy and disaster, are fully accounted for on the simplest of all bases, and shown to be *natural* elements of the animal body morbidly changed in appearance and local developments by disease, but not the cause of disease. That they are simply the organizing forms of fibrin and the granules of decolorized blood-corpuscles, supplemented also, to some extent, of course, by the shreds and granules of dissolved natural tissues in cases of suppuration or ulceration.

What Professor Wood says of the "infinitesimal plant," or micrococci, being "found in myriad numbers in the spleen," also allows of the simplest of all explanations. He was unquestionably looking at white, or, more strictly speaking, at decolorized blood-corpuscles in the spleen, and the granules into which many other such corpuscles had been broken, which are sent to the spleen to be still further disintegrated, preparatory to being cast out of the system through the bowels, as refuse matter. Besides, the blood-globules are not made in the spleen, but by the mesenteric glands, and disintegrated by the spleen and liver at the close of their life, whether of old age or disease.

It will thus be seen what a purely scientific and yet very simple solution we have of all these many points, and how inseparably connected they are. All mystery is at once dispelled, the physician's mind is released from the contemplation of something he does not understand and the dread which that engenders, and his entire time and thought can be given to the best curative means to be employed in the disease, instead of being bewildered and distracted, as now, to find something that will the most effectually destroy what does not exist—at least, as a devouring parasite, or even as an element *foreign* to animal life—excepting in the imagination.

Mystery and error must be made to give way to simplicity and truth in pathology.

Cutaneous Eruptions Caused by the Use of Certain Medicines (*Giorn. It. dei Malatt. Vener. e del Pelle*, June, 1881).—Anspitz, in his valuable "System der Hautkrankheiten," gives the following list of eruptions liable to follow the use of certain remedies. It will be a useful table for reference:

Quinine.—(*a*) Scarlatinous erythema, (*b*) morbillous papular erythema, (*c*) hæmorrhagia and purpura, (*d*) wheals, œdema, pruritus.

Cinchona, Belladonna, Strychnine, and Stramonium.—Manifestations like papulæ sudorales.

Digitalis.—Erythema after a few days' use.

Aconite.—Vesicular exanthema.

Santonine.—Vesicles, wheals.

Rhus Venenata and Toxicodendron.—Vesicular eruption.

Opium and Morphine.—Erythema, papular eruption, with much desquamation and pruritus.

Pilocarpin (?)—Augmentation of the perspiration.

Phosphorus.—Purpura.

Phosphoric Acid.—Bullous eruption.

Mercury (internally).—Erythema, eczema.

Arsenic.—Erythema and papules, eczema.

Carbolic Acid.—Erythema, vesicles, or wheals.

Salicylic Acid.—Purpura, vesicles with laryngeal catarrh, wheals.

Chloral Hydrate.—Erythema (well colored), pruritus, desquamation, purpura and petechiæ, eczema with crust and scab.

Balsam Copaiba, Cubebs, Turpentine.—Vesicles, erythema, eczema.

Cod-Liver Oil.—Acne.

Iodide of Potash.—Papules, vesicles and bullæ, pustules and ecthyma, eczema, ecchymosis, and purpura.

Bromide of Potassium.—Papules and pustules, deep tubercles and ecchymosis, vesicles, ulcers.—*Virginia Medical Monthly.*

TEMPORARY FEBRILE RISE AFTER SIMPLE FRACTURES.

By J. W. STICKLER, M.D.,
ORANGE, N. J.

In the treatment of quite a large number of simple fractures, while serving as house surgeon to the Presbyterian Hospital, N. Y., I discovered that in almost every instance there was an appreciable elevation of temperature beginning within twelve hours after the receipt of the injury. In order to ascertain definitely the range of temperature, I had, at the suggestion of L. A. Stimson, M.D., the temperature of a number of patients taken night and morning for several consecutive days. The table shows the result. A few of the temperature-charts were kindly furnished me by my successor, Dr. W. K. Simpson.

No. Case.	Age.	Diagnosis.	Etiology.	Temperature.															
				1st day.		2d day.		3d day.		4th day.		5th day.		6th day.		7th day.			
				M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.
1	23	Fracture of femur in lower third.	Struck with an iron bar.	98⅘°	99⅖°	99°	99¼°	100°	100¾°	99¾°	100¾°	99¼°	101°	100°	101°	100¾°	101°	98⅗°	98¾°
2	16	Fracture of leg.	Fall from a window.	..	100⅖°	99°	99°	98⅖°	100°	98°	98¾°	99°	100°	98°	99°	99¼°	99°	98⅗°	99°
3	45	Colles' fracture.	Fall.	98°	99°	97⅗°	98⅖°	99°	98⅗°	98⅗°	98⅗°	98°	98⅘°	98°	98°	98⅗°	98°	98°	98⅗°
4	23	Fracture of left femur in lower third.	Kicked by a horse.	98⅖°	99¼°	100¾°	99⅖°	99¼°	99¾°	99°	98⅗°	98⅘°	99¼°	99°	98⅘°	99¼°	98⅘°	99¼°	98⅘°
5	21	Fracture of clavicle	Fall on the side.	..	99¼°	100°	100°	99¼°	99¾°	99¼°	99¾°	99⅗°	99°	100°	99⅖°	99⅗°	99°		
6	23	Fracture of patella.	Muscular action.	98⅖°	98⅖°	99¼°	98⅘°	98°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°	98⅘°	98⅗°	98⅗°	98⅘°	98⅘°	98⅘°
7	35	Fracture of leg.	Fall.	..	98⅗°	99¼°	99¼°	98⅘°	99°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°	98⅗°
8	40	Fracture of tibia.	Fall.	..	101°	99⅗°	99⅗°	98⅘°	99¼°	98⅘°	99¼°	98⅘°	99¼°	98⅘°	99¼°	98⅘°	99¼°	98°	98⅗°
9	47	Fracture of femur in lower third.	Kicked by a horse.	98⅖°	101¼°	99¼°	99°	98⅘°	99¼°	100¼°	100¼°	100°	100¼°	100°	99¾°	99°	99¼°	99°	98⅗°
10	32	Fracture of cervix femoris.	Wrestling.	98°	101⅘°	99°	99¼°	101°	99¼°	101¼°	101°	102¾°	101°	102°	101¾°	Fell to normal on 11th day.			
11	30	Fracture of femur in upper third.	Fall.	..	102°	101°	101°	100°	101°	100°	100¾°	98°	101°	99°	99¼°	Fell to normal on 8th day.			
12	34	Fracture of leg.	Wrestling.	99½°	99°	99°	99¼°	97°	99°	99°	99°	99°	99°	98¾°	99°	98¾°	99°	98⅗°	98⅗°
13	59	Fracture of leg.	Wrestling.	99¾°	100°	98°	98¼°	99¼°	99°	99°	99°	99°	99°	99¼°	99°	98⅗°	98⅘°	98⅗°	98⅗°
Average temperatures				99⅒°	99⅞°	99⅒°	99⅚°	99⅒°	99⅚°	98⅝°	98⅞°	98⅞°	99⅛°	99⅛°	99⅒°				

Dr. Theodore Billroth, in his article on "Traumatic Fever of Open Wounds," states that in some instances the temperature begins to rise immediately after the injury, but more commonly on the second, third, or fourth day. The highest temperature attained, although this is rare, is 104–105° F. As a rule, it does not rise above 101–102° F. This simple traumatic fever does not last more than seven days, and in some cases it is entirely absent. It will be observed that the course of temperature as here given corresponds very closely with that of simple fractures. In every instance except one (No. 6) did the temperature rise within twelve hours after the injury. The highest elevation reached was 102⅘° F., and as it is probable that such a temperature in these injuries is rarely exceeded, it may be regarded as the maximum elevation; hence, a thermometric difference between subcutaneous and open wounds, *i.e.*, a temperature of 102⅘° F., following a subcutaneous wound from which air is excluded, is much lower than the maximum temperature of an open wound whose surface is exposed to atmospheric influences. The highest average elevation of temperature of the thirteen cases was attained during the first three days, although this result does not indicate the day on which in every instance the highest point was reached, for in Nos. 1 and 6 the maximum elevation was reached on the fifth day, in No. 9 on the fourth day, while in Nos. 2, 3, 8, 11, and 12 it was attained on the first day, and in Nos. 4, 5, 6, 7, and 13 on the second day. Thus, while the temperature does not reach the maximum of elevation in some cases till the fourth or fifth day, it is the rule for it to reach the highest point during the first forty-eight hours. The duration of the febrile rise in these cases is also about the same as in open wounds, for in ten of the cases the normal temperature was reached on the seventh day, and after that period did not vary from 98⅕° F. more than ⅕° or ⅖° F. In only one case was the fever absent; that was in the case of fracture of the patella, due to muscular action. If this injury may be substituted for such an one as Billroth refers to when speaking of a slight wound which causes no general rise of temperature, the analogy between the febrile disturbance of the two lesions, open and subcutaneous wounds, will be nearly perfect. Hunter says: "The injuries done to sound parts I shall divide into two sorts, according to the effects of the accident. The first kind consists of those in which the injured parts do not communicate externally, as concussions of the whole body or of particular parts, strains, bruises, and simple fractures, which form a large division. The second consists of those which have an external communication, comprehending wounds of all kinds and compound fractures. The injuries of the first division, in which the parts do not communicate externally, seldom inflame, while those of the second commonly both inflame and suppurate. Of the two injuries inflicted in a wound—the mechanical disturbance of the parts and the exposure to the air of those that were covered—the exposure, if continued, is the worse. Both are apt to inflame, but the exposure excites it the more certainly and in the worse form. In simple fractures an early consequence is a production of inflammatory lymph containing a large proportion of albumen, fibrinogenous substances, chlorides, phosphates, and carbonates. The blood-vessels are dilated, the blood-current becomes slower, many of the white and some of the red globules pass through the walls of the vessels. The tissue-elements are swollen, while the nuclei and cells undergo proliferation. These changes give rise locally to: 1st, pain, because of pressure on the nerves by the swollen tissues; 2d, redness, because of increase of blood,

exudation of hæmatin and red blood-globules; 3d, swelling, on account of the exudation of lymph, increased cell-growth, and increased flow of blood to the part; 4th, heat, because of increased flow of blood and chemical changes. The local signs of inflammation are well marked in proportion as the part injured is near the surface—in fracture of the tibia the inflammatory signs being well marked, while in fracture of the thigh they are more obscure." If, then, it is the rule for these phenomena to follow a subcutaneous mechanical disturbance of the tissues, occasioned by the fracture of a bone, it is not fair to assume that subcutaneous wounds seldom inflame because air is excluded from them, for the cases tabulated seem to indicate that inflammation does follow these injuries, and that the presence of air is not a necessary condition for the development of such an inflammation. Of course the process was a much milder one than would have been the case had air been admitted into the wounds, in which case suppuration would have supervened, provided the exposure had been continued long enough. Inflammation, however, may be just as complete in type when organizable lymph is a product, as when pus is formed. The thermometric range in these cases apparently indicated the duration of this inflammatory stage, for it will be remembered that the temperature remained highest during the first three days—the period mentioned by pathologists as the one in which the inflammatory lymph is thrown out. The conclusions, then, which may be deduced from a consideration of these cases, so far as they go, are: 1st, that it is the rule rather than the exception for the temperature to rise after simple fractures of the long bones; 2d, that the maximum elevation of temperature, in the majority of these cases, is reached during the first three days, or "the period of inflammation."

A Novel and Simple Method of Removing Insects from the Ear.—B. F. Kingsley, M.D., Acting Assistant Surgeon, U.S.A., of Fort Quitman, Texas, writes: "The article in The Record of December 30th, on 'The Expulsion of Insects from the External Auditory Canal,' brought to my mind a simple case that came under my notice a few years ago, which may be of some interest. While en route from San Antonio, Texas, to Fort Concho, Texas, in June, 1877, with recruits, I was aroused from my sleep one night, about midnight, by a man who, much frightened, said 'he had a bug in his ear.' In short order I had a light, a pair of fixation-forceps, a glass penis-syringe, and a basin of water, and in a shivering condition proceeded to give the patient relief. I had no sooner placed the candle before the ear than the bug—a small black one—ran out over the cheek, and jumped off on to the ground very quickly. When told that the bug was gone he would not believe me, because I had done nothing; he had been intent on my syringe—which evidently he had used before for quite another purpose—and had not noticed the escape of the bug. Upon several occasions while scouting, I have been successful in removing insects from the ear at night by simply placing a light near. We all know what a peculiar attraction light has for insects at night, and under the circumstances related, it seems to retain its attractive power over an aural abiding-place, and the insect rushes toward it as usual, with the desired result."

Progress of Medical Science.

Surgical Operations and their Relations with Diabetes, and the Origin of the Latter.—At the meeting of the Académie de Médecine, held November 29th, M. Verneuil made a communication having practical bearing on the obscure topic of diabetes mellitus and its inter-relations with other affections. The first case brought forward was that of a man, fifty years of age, of robust figure, who consulted him for epithelioma of the penis. Some years previously he had suffered, while in Africa, from intermittent fever, but had apparently recovered. His urine contained a large proportion of sugar daily (twelve grammes). On the second day following the operation he had a well-marked attack of intermittent fever, which yielded to quinine, but about the fifteenth day sugar reappeared in considerable quantity, although the antidiabetic treatment had previously reduced the sugar to a minimum.

The second case narrated was that of an Algerian, who was operated upon for epithelioma of the tongue. His urine contained sugar and urea. On the fifth day after the operation he experienced most acute pain in the wound, and upon a number of consecutive days, at the same hour, there was hemorrhage from the wound. Quinia controlled the pain and checked the bleeding.

A third patient had gangrene of the heel. He had suffered much from malarial fever, and his urine was highly charged with sugar. M. Verneuil, recognizing the case as one of glycosuric gangrene, administered the sulphate of quinine. The eschar separated and the wound healed. Judging from these and other instances in his experience, the following conclusions were formulated, which in many respects corroborate older views expressed by Corneliani, Sydenham, Cullen, Prout, Griesinger, and many others. Malarial infection is frequently engendered by glycosuria, which assumes two forms: one contemporaneous with the access of fever, and, like it, transitory; the other slow in development, independent of febrile exacerbation, and of permanent duration. This latter variety seems to attack, by preference, the malarious of vigorous type and subjects of arthritic difficulties. The intercurrent affections in the malario-diabetics may assume the type of either one or the other of the associated diseases, or of both combined. When, in such cases, surgical operations are performed, a fresh impetus may be given to either the malaria or the glycosuria, preferably the former.—*Bull. de l'Acad. de Méd.*, 48, 1881.

Lumbo-Colotomy as a Preliminary Measure in Imperforate Rectum.—Dr. W. A. Byrd, of Quincey, Ill., describes an interesting series of procedures, which succeeded in establishing a passage for fæces in the normal situation. Being called to see an infant, two days old, with imperforate anus, he made an incision backward and upward from the anus, to the depth of two and one half inches. No evidence of intestine being obtained, and the trocar and canula having previously failed to discover intestinal contents, lumbo-colotomy was performed upon the left side. An incision, two inches in length, was made downward and forward from a point over the external border of the quadratus lumborum muscle, and half way between the ilium and the ribs. The left kidney was disclosed in this way,

but, by an incision extending one inch farther forward, the descending colon was reached. An oblique cut was then made in it, three-fourths of an inch long, and the edges of the intestinal opening were stitched to the skin at the inner border of the external wound. The wound was well cicatrized in a week, but the bowel would evert to the extent of some two or three inches, giving great pain if the part was not returned and held *in situ* by a pad.

Accordingly a further effort was made about a month later. The finger being passed into the bowel, through the wound, it was found that the calibre of the bowel easily permitted its passage for about three inches, when it suddenly narrowed. Into this narrow portion was passed a small sound, used as a searcher in infants, and the end of it was worked down in the narrowed bowel toward the anus.

An incision, two inches deep, admitting the index finger, was made from the anus to the coccyx, with the view of meeting this instrument from below. Finding that only about one-eighth of an inch intervened between the instrument and the finger, the former was pushed through the intermediate space. To the point of the searcher a short thread was then attached, and this in turn to a No. 10 Jacques' catheter, which was drawn into the passage thus formed, while either extremity projected, one from the upper and one from the lower wound. But a third operation was required to secure the establishment of a more natural outlet for the fæces. Taking a piece of soft-rubber tubing, about a foot long and as large round as the little finger, half an inch of one extremity was tucked up into the tube, making a bulbous extremity. This end was then attached by a stout thread to the catheter and drawn into the bowel. By steady traction the narrowed cul de sac was drawn down into the new anal opening and fitted into place, so that there is now a continuity of mucous membrane from mouth to anus.

It is now hoped, and confidently expected, that the first artificial opening will close without further operative interference. In case this hope is not realized, a plastic operation will be resorted to. The infant is now doing very well.—*St. Louis Courier of Medicine*, December, 1881.

Bennet on Laceration of the Cervix Uteri.—In the Gynecological Section of the International Medical Congress of London, Dr. J. Henry Bennet read a paper calculated to check some of the enthusiasm with which the advocates of Emmet's operation have proclaimed the virtues of this method for relieving uterine disease. Referring to the work of American and German gynecologists during the past few years, he credits them, the former especially, with doing good work in bringing the matter of laceration so prominently before the profession, but he dissents from the view that such lacerations are the fertile causes of hypertrophy, displacement, leucorrhœa, sterility, or are apt to produce *post-partum* hemorrhage, septicæmia, metritis, and the like.

He admits that these morbid conditions may follow labor in a healthy female from manual or instrumental interference, but he regards such accidents as exceptional. In an experience of forty years he has always succeeded in healing the laceration and in curing the morbid manifestations accompanying them, by simple surgical means and appliances, without any plastic operation. In a certain class of cases the propriety of such an operation may be decisive, as when the laceration extends to the bladder. He observes also that, singularly enough, during the last twenty years, gynecologists, eminent on both sides of the water, advocated deep incision of the cervix, even down to the body of the uterus, for nearly every uterine ailment—in fact, the same class that now are to be cured by the opposite course of treatment, viz., sewing up the rents. Such extreme doctrines, therefore, rebut themselves. The explanation given of the apparently marvellous cases is as follows: those who perform the operations do not themselves, in most instances, follow up their subsequent histories.

The eminent gynecologist leaves the operation to the family attendant, thinking, most conscientiously, that he has cured the case, when, in reality, the health has been little, if at all, improved; or the patient may belong to that class of women whose uterus and ovaries require attention from the date of menstruation to the menopause. No treatment of any form or kind will give them complete relief, but they are always ready and willing to submit to anything new in the way of treatment or practice, and, whatever is done, are apt to think themselves improved. The real therapeutic value of any treatment in such cases cannot be appreciated until years have passed by. Dr. Bennet states that, in uttering this protest against methods that he regards as unreasonably surgical, he has no desire to obstruct real progress, but will still accept new views and new doctrines, provided they have a legitimate basis on facts.—*British Medical Journal*, November 26, 1881.

Hydro- and Pyo-Salpinx: their Causation, and the Normal Position of the Ovary.—At a recent meeting of the London Pathological Society, Mr. Lawson Tait exhibited twelve specimens, with the object of directing attention to the pathological anatomy of diseased Fallopian tubes. The patients had, with one exception, been married and pregnant, but had been long under treatment for menstrual irregularities and distress. As bearing upon the etiology of such affections, it was observed that the cases (nine in number) had each given a history of some previous pelvic inflammation, of pain on exertion, during sexual intercourse and menstruation, and of tender, fluctuating, localized swellings on the sides of the uterus. The treatment recommended was excision of these uterine appendages. Tapping was held to be difficult, and, if practised, useless. All of the operations proved successful, and the patients (twenty two in number) were completely cured. Menstruation was stopped, but the marital function was restored. Ovaritis is named as the primary disease, the inflammation extending progressively along the tube to its uterine extremity. In commenting on these cases, Mr. A. Doran alluded to the falsity of our prevailing opinions as to the relation in position between the ovary and the fimbriæ of the Fallopian tube. Instead of overhanging the ovary, the fimbriæ lie beneath or to the outside of it, and therefore the "*morsus diaboli*" is a delusion. The ripe ova have simply to drop into the tube, and they may be fortunate enough to fall at once among the spermatozoa. Pathological anatomy corroborates this view, for, when adhesions take place between the ovary and the fimbriæ, the latter underlie or are to the outside of the former.—*Lancet*, December 10, 1881.

Medical Department of the University of the City of New York.—Dr. William C. Jarvis has been appointed lecturer in Laryngology, vice Professor L. Elsberg, M.D., resigned.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, February 11, 1882.

THE PROGRESS OF THERAPEUTICS.

It seems to be in the nature of scientific study to run for a time in certain special lines, to the neglect of others—first one branch and then another being pushed far out in advance of the general progress of the science, and receiving, for the time, almost the undivided attention of investigators. This has been pre-eminently the case in medicine. Anatomy, physiology, physical diagnosis, and lastly pathology, have each in their turn almost monopolized the study of those who gave direction to medical thought. But the branch which includes in itself the object and aim of all the others has always been allowed to lag far behind. More has been known about everything else in medicine than about the cure of disease.

It is only within a comparatively recent period that any systematic effort has been made to do for therapeutics what so many and such zealous workers have been doing for the other departments of medical science. There can be no doubt that legitimate medicine owes not a little to the homœopathists for stimulus given to investigation into the so-called physiological action of drugs; and it is only to be regretted that the good work which they did was so overlaid by absurdities as to make disgusting the task of separating the wheat from the chaff. Nevertheless, partly by their efforts and partly by the efforts of others, a beginning was made toward a thorough and critical study of the materia medica in its relations to the human body. From this beginning there has been very notable progress, and especially during the last two or three decades. A great stride forward was made when the attention of investigators was directed toward ascertaining the hidden steps by which the obvious, palpable action of a drug was brought about. For example, it is the obvious action of certain drugs to produce sleep, and of others to produce convulsions, and the earlier observers were contented with simply noting these facts. But later investigators went beneath these superficial appearances, and by direct experiment found that in the one case sleep was preceded by anæmia of the brain, and in the other that the convulsions were accompanied by congestion of the cord. Still further investigation showed that these vascular changes were produced through the agency of the nervous system, and that, at least in the case of the brain, mechanical factors sometimes entered into the problem, so that apparent venous congestion produced real capillary anæmia by the compression exerted upon the cerebral mass.

This example illustrates the direction which therapeutical research is now taking, and in which the most encouraging progress is being made. Medicines are beginning to be classified according to their primary action rather than their secondary results, and the old loose and general designations, such as stimulants, tonics, antispasmodics, evacuants, etc., are giving way to terms expressing the action upon special centres, such as cardiac, vasomotor, cerebral, spinal, cerebro-spinal, excitants and depressants, etc. We now ask ourselves, not What is good for the disease in hand? but What are the morbid conditions which find expression in the disease? How far are they capable of being modified by drugs? and lastly, What medicines will be best adapted to effect these modifications? This series of questions shows not only the dependence of rational therapeutics upon pathology, but also that pathology cannot be brought to the aid of therapeutics except through a knowledge of the initial action of drugs upon the several parts of the body. Thus, if our knowledge of pathology enables us to determine that there is spasm of the vessels in a given part, and experimentation has taught us that a certain medicine will relax the vessels of that part, we have an exact indication for the use of that medicine such as no amount of merely clinical experience could afford us.

Most important results have been obtained in determining the effect of particular drugs upon particular organs. It is here that all the good that homœopathy has accomplished has been done, although it is entitled to credit for but a very small part of the progress made.

In a general way it has, of course, always been known that emetics act upon the stomach, and cathartics upon the bowels; that the skin is stimulated by diaphoretics, and the urine increased by diuretics; and the use of drugs with the purpose of "stirring up the liver" is as old as medicine itself. But in later times it has been found that this principle of elective action has a much wider range than was supposed, and is much more definite and exact in its application. Thus, the action of ergot upon unstriped muscular fibre makes it much more than a "parturient," and that of aconite upon the vaso-

motor centres makes it more than a simple diaphoretic or febrifuge. The specific action of the solanaceæ upon the third nerve, and of aconitia upon the fifth, of quebracho upon the respiratory centres, and of digitalis upon the cardiac, are instances in point. Nay, sometimes special branches of a nerve are affected to the exclusion of other branches of the same nerve, as, for example, the twig to the levator palpebræ, which is paralyzed by gelsemium.

Examples of this elective action are already very numerous, and this list is probably but just begun. Indeed, it seems not unlikely that in the course of time nearly every organ and tissue in the body will be found to have special relations to special drugs.

Very valuable work has been done in studying the antagonisms of medicines. The British Commission appointed some ten or twelve years ago, with Hughes Bennett at its head, brought out some very important results, many of which, however, had been anticipated in our own country, and that too by a worker belonging to the gentler sex. The Cartwright lectures by Professor Bartholow, along with much that is original, give an admirable summing up of what has been accomplished of late in this most interesting field, while Fothergill's little treatise on the same subject is full of valuable information.

Going back only so short a period as twenty years, we have had within that time many new and most valuable medicines added to our list. Among these may be mentioned the bromides, iodoform, chloral, carbolic, salicylic and boracic acids and their compounds; thymol, amyl nitrite, guarana, jaborandi, quebracho, etc. Hypodermic medication with its multiform uses, and rectal alimentation, have been added to our resources within this period.

The use of small and frequently repeated doses, which has been introduced within a few years, seems to have much to recommend it, especially in the case of drugs which are rapidly eliminated. If the action of a medicine is needed at all, it appears more reasonable that it should be sustained at a nearly even intensity, rather than that the field should be occupied alternately by the remedy and the disease. The subject has not yet received the attention which it deserves, and it is to be hoped that its merits will be tested on a sufficiently large scale to afford conclusive results.

At the present moment there are two societies in New York which are working toward a more perfect development of therapeutics. The one is the Therapeutical Society, which takes up one form of treatment after another, focussing upon it the attention of the members, and ultimately from the experience of all endeavoring to arrive at a just conclusion. The other is the Materia Medica Society, which aims to advance the study of the medicines themselves. Both societies are doing good work—the first mentioned, which is the older, having issued several reports, which have been well received both at home and abroad.

On the whole, whether we consider the many valuable additions to our list of remedies, or the more exact knowledge which has been obtained of the action of medicines, the outlook for therapeutics is full of promise. Stupid legislation may interfere with the experimentation upon which its most trustworthy results are founded; but, even if so, a basis has been obtained for clinical observation which will enable us to interpret better our daily experience at the bedside, to the end that we may be qualified to discharge, in a more practical and intelligent manner, our first duty to the sick.

THE AMERICAN MEDICAL STUDENT.

THERE are at present in the United States about twelve thousand medical students. The number has more than doubled in the past ten years. The universality of this class of students has also become more pronounced. There is now a "centre of learning" for them in almost every State. In Maine, in Oregon, on the high plateaus of Colorado, on the prairies nearer east, and along the Gulf there are institutions which all furnish exceptional advantages for the prosecution of his work. It is evident that the medical student has become no small factor in society.

We have 1,800 in this city, and there are not far from 2,200 in the State. Ohio stands next in number, having 1,400, thanks to a large attendance upon irregular schools. Pennsylvania follows with 1,200 students, and Illinois with 1,000, nearly one-third of the last number being homœopaths. Missouri and Kentucky have about 700; Maryland, Michigan, and Tennessee, each 500. Massachusetts has only about 400.*

It would not be easy to portray the type of a class so widely distributed and subject to so many different conditions. The Harvard medical student, if we may credit the statement of his instructors, must be quite a different creature from some of his prairie or even of his New York *confrères*. The per cent. of college-bred men in the Harvard Medical School is nearly fifty. That in the Kentucky schools is zero. Among Missouri's seven hundred students two had received a classical education. New York's per cent. is about 17; that of Illinois, 16; that of Pennsylvania, 8, and that of Ohio, 6,† these being only approximate figures. While the possession of a careful preliminary training does not always insure superiority as student or physician, it undoubtedly has much influence upon his character and manners.

New York City gathers in medical students from every quarter of the Western hemisphere, and here

* Report of the Commissioner of Education for 1879. Washington, 1881.

† Vide op. cit.

is the best place, perhaps, to study the average specimen and place a due value upon him.

He comes in from the country or some small town, where he has been spending the summer with his preceptor. He has picked up quite a number of ideas in his recent work, and has some very positive views upon a few pathological or therapeutical points. Having consulted a boarding-house directory, he takes a room with board, in an establishment which can hardly be supremely genteel and charge only six dollars a week. The question of locality was settled with our student, however, by his seeing a nice-looking girl practising on the piano in the front parlor, while he was discussing terms with the landlady. He matriculates, joins a quiz, and settles down to work; for our American medical student is essentially an industrious fellow. He must graduate after two courses, and his hard studying is done for the most part during his two winters at the college. But he is not entirely unsocial or non-convivial. He picks up some acquaintances, and takes a chum. There is a gradual accumulation of beer-bottles under the bed. A few bones, and rather more pipes adorn his tables and walls. Although the chemical professor has discoursed upon nicotine, and shown that

> "One (or two at most)
> Drops make a cat
> A ghost,"

a permanent odor of *Tabaci folia* attaches itself to the room.

As our student progresses in acquaintances, he finds that the mind really needs intervals of rest and relaxation—a point in mental hygiene which takes an especially strong hold upon him. By this time he knows the young lady of the house very well. She has taken him to church, and he has escorted her to the theatre. He horrifies her with tales of the dissecting-room, and with the most harrowing and hemorrhagic descriptions. She thinks the doctor's life very hard, but sympathetically asserts that it is a very noble one; and it is not impossible that he squeezed her hand one evening in the back parlor.

Our friend awakes on a certain morning, and has an indistinct impression that he visited from ten to twenty beer-saloons the previous evening, with a party of friends. How it ended, or how he got home it is not easy to recall. This experience, though subsequently repeated, is not a frequent one.

Our student's conduct in the lecture-room is, on the whole, a dignified one. There is occasionally an interchange of missiles between hours, some loud talking, or even a scrimmage. But he finds that to be boisterous is a habit that is wearing away, and now has a hold only in the inferior schools.

The individual who is kindly sitting for us does not wear fashionable clothes. He shows a slight aspiration for gentility in the matter of sleeve-buttons, which are in the skull and cross-bones style, with green glass eyes; also in his cane, of which the head is grotesquely carved. With this he walks up Fifth Avenue on Sundays. He has one or two nice acquaintances, but, on the whole, his appearance in society is confined to the unpretentious boarding-house hop or more quiet social gatherings, all terminating invariably in ice-cream and cake. He still likes to bring in stories from the college into his general conversation, and is rather proud of the sensations which his descriptions or comments call out. When dining with his chum and another medical friend at the general table, the conversation may at times have a somewhat atonic effect upon the lay listeners.

As examinations approach, he works harder, smokes more, and drinks just as much; and when he has passed and received his degree, he is just as likely as not to pack up and go straight home in a perfectly normal and non-alcoholic condition.

Our average student is not a bad fellow nor an extraordinary fellow; he has no great fondness for study, but he works with enthusiasm and graduates creditably. He settles in the country or in some provincial centre, battles with fortune and disease against heavy odds, for several years, finally establishes himself, and becomes a useful and respected member of society, passing from the "average student" to be something more than an average man.

There are some odd types hanging about our colleges, and among them we should not forget the *dilettante* student, who has become something of a feature in late years. He has plenty of money, and spends it freely on cigarettes, beer, the theatre, and the other necessaries of medical student life. Just now he wears very tight pants, very short coats, and very pointed shoes. His parents did not succeed in persuading him to go through college; but they want their boy to study a profession, and medicine seemed to be in least discord with his tastes. The student in question does not study, but has considerable dissecting-room enthusiasm, likes clinics, takes a great many sprees, and finally hires a tutor to cram him for examinations. He sometimes turns out well after all.

The rowdy student has not entirely disappeared. He is dirty in person, coarse by nature, and made more so by his studies, for medicine makes its followers either better or worse. He revels in obscene stories and vulgar jokes. During lecture he takes a few notes, and expectorates a great deal of tobacco-juice. He never studies, but he crams spasmodically, borrowing his friend's notes for the purpose. As the end of the term approaches he becomes greatly excited, and is very busy getting "points" for the examination, with which he mixes himself up till he is a curious picture of bravado and ignorance. We are sorry to say that he generally passes, after which he proves to his companions that he re-

ceived the hardest and most unreasonable questions. He then proceeds with all rapidity to get into a state of alcoholic coma, from which he in time emerges, and lays plans for his prospective high and beneficent career.

Among our twelve thousand medical students there is a per cent., which is not large, of earnest, cultivated, and ambitious minds. They may be brilliant, or may show only dogged industry and high purpose. It is from these that American medicine may most expect its progress. They are those who can work patiently in laboratory and library as well as by the bedside, who are not content with routine or a narrow knowledge of their craft. Their number is increasing, perhaps more proportionately than the general increase. Knowing that there are such students as these, it is comforting to reflect that in the fierce contest for a foothold among our seventy thousand medical men, those who are really best will, as a rule, succeed. We have to admit that in a minority of cases audacity and unscrupulousness press hard upon the honest practitioner.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE ARMY.

The annual report of the work of the medical staff of our army has always some items of interest. Aside from special labors at Washington, our army surgeons show themselves awake to their opportunities to a greater degree, as a rule, than civil practitioners.

During the fiscal year 1880–81, there were 5,962 cases of wounds, accidents, and injuries recorded among 23,804 men. The mortality was 3.8 per 1,000. The officers who died during the year were Lieut.-Col. R. S. Satterlee, Lieut.-Col. George E. Cooper, Major Geo. A. Otis, and Capt. John W. Brewer.

There were, at the date of report, 162 medical officers on duty and 16 on leave of absence, making a total of 178. There are nine vacancies in the medical corps in the grade of Assistant Surgeon. During the past year there were 221 applicants for admission to the service, of whom 183 were examined in whole or part, and 29 found qualified.

Of more general interest are the facts regarding the library, the museum, and the medical history of the war. There is a record of an addition of nearly three hundred new specimens to the museum, besides the printing and distribution of over a thousand photographs of surgical objects. Two hundred and ten illustrations have been prepared for Volume II., Part III. of the "Medical and Surgical History of the War." The written portion has been advanced one hundred and fifty-two pages.

Regarding the library, the urgent request of last year for a fire-proof building is now reiterated. Nearly two thousand five hundred volumes and three thousand two hundred pamphlets have been added to the library during the past year. This makes the total number about fifty-four thousand volumes and sixty thousand two hundred pamphlets. Volume II. of the Index Catalogue has been printed and distributed. The manuscript of Volume III. is now going to press. An appropriation for printing Volume IV. has been asked for, and it is to be hoped that it will be promptly given.

THE HARVARD MEDICAL SCHOOL AND EDUCATIONAL REFORM.

It is a pleasure to observe the continued prosperity of such American medical colleges as are showing a genuine desire to elevate the educational standard of the profession. In the recent report of the Harvard Medical School for 1880–81 we are informed regarding the working of the new and higher requirements adopted by its authorities.

The whole number of students keeps at about the same. The number who applied for matriculation examinations was forty, of whom four were rejected. Of the eighty-five applicants for the degree of M.D., twenty-five were rejected. As about one-half the students have a literary or scientific degree, and all have had a compulsory three years' course, this indicates a thorough sifting.

In regard to the fourth year course, the class last year contained ten students. Five of them received hospital appointments, and only four went up for the special degree given for the extra year's study. None of these passed. The report states that it is too soon yet to say anything regarding the success or failure of the attempt at a four years' course. It seems probable, however, that it will not amount to much until it is made obligatory, or with only the alternative of a hospital appointment.

The new college building is being erected. It is expected to cost $270,000, including the site. A large part of this money has been raised. An attempt is also making to endow scholarships and professorships. As Harvard Medical College, since 1871, ceased to be a private venture and became part of the university, there is not likely to be any great difficulty in securing money. Already in the past decade the institution has received over a quarter of a million.

The recent history of this medical college is an instructive one. It is admitted that endowments are extremely, if not absolutely, essential for conducting a college according to the highest standards. But endowments will, of course, never be given to institutions which are really only commercial enterprises. Medical colleges must be under higher patronage than their own professors before they can get help from outside.

An Exceptional Case.—Louis XV. died in his sixty-fifth year of confluent small-pox. He had had the disease once before, when fifteen years old.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 2, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

SANITARY SCIENCE AND THE PUBLIC HEALTH.

THE evening was devoted to the consideration of the scientific work necessary to prevent the insidious entrance of disease into dwelling-houses. Introductory to the paper of the evening, the PRESIDENT delivered a brief address, in which he said:

"There is not a physician in this city, engaged in active practice, who is not frequently called on to see disease of various degrees of severity often resulting in death, which has been caused by a poison. If we can see our patients early enough, we can successfully meet such poisons as arsenic, as corrosive sublimate, as aconite, and all of this class, because we have antidotes which will prevent their effects. But where the poison is introduced into the system so insidiously that the subject is unconscious of its absorption until its effects are produced, then it is not a question of antidotes, but the problem is, how shall we counteract its consequences, and how shall we keep our patients alive until the life-destroying agents have ceased to put in jeopardy the vital powers?

"The special poison to which I now refer is the gases resulting from defective plumbing, to which all classes, the rich as well as the poor, are alike exposed.

"None but physicians can know how general this poison is, and how positively it explains much of the disease they are called upon to treat, and of the many deaths which follow.

"When I assert that it is a daily experience with me to see persons whose general health is suffering from this poison; that I have seen infants, children, and adults suffering from diphtheria, or scarlet fever of a mild type complicated with this disease, and destroying life; also those in vigorous health stricken down by typhoid fever, and that the cause has been demonstrated to be this poison, I only state facts which are common in the experience of all physicians in this city. In some cases this has been the result of ignorance of the very unsanitary conditions which environed them.

"It is the custom of many in this city to take their families for health and pleasure to various summer resorts, but every year for some time past some of these places have proved fatal to health, and often to life, by typhoid fever, so that now it seems to be the plain duty of every physician to warn such families as hold him responsible for their health, of the danger of every such resort as does not give them the evidence of a competent sanitary expert that their house is safe from all such dangers.

"None but physicians are alive to the fact that many of those now living in beautiful and expensive houses in this city are like the inhabitants who dwell at the base of Mount Vesuvius, whose surroundings mask and hide the danger and desolation of the lava and ashes.

"The physician should never be an alarmist; he should never hoist the signal of danger except when he sees the forewarning signs of an impending storm. Unfortunately, he never can see the danger from this poison until its effects are already beginning to develop, as shown by disease. Then, again, he labors under the difficulty of being unable to demonstrate, or even suggest, where the poison originates. He can only say that science has established the fact that certain symptoms are due to certain causes. It seems to me that it is the duty of the profession to educate itself up to the point of being able to demonstrate intelligently to their patients how the danger from these poisons may originate. I now have the pleasure of introducing MR. CHARLES F. WINGATE, who will read the paper of the evening."

The paper was entitled,

PRACTICAL POINTS IN PLUMBING: KNOWLEDGE NECESSARY FOR PHYSICIANS FOR THE PROTECTION OF THEIR PATIENTS.

The speaker, after making some general remarks concerning the relations of medicine to sanitary science, proceeded to the consideration of the unsanitary conditions of dwellings and their most frequent sources.

First, *dampness*, such as arises from imperfect measures, or none at all, taken to prevent snow and rain from soaking into the soil, and finding its way directly beneath the foundations of the building. Broken and leaky underground drains very commonly were frequent sources of soil, saturation, with not only moisture, but sewage matter. Made lands, fillings with broken rock, which increased the area of dampness, old water-courses, old drains, originally intended to carry off rain-water only, and never constructed for sewers, etc.

The sources of *foul air* were broken and leaky gas-mains, cold air-boxes for furnaces, etc. The refrigerator should never, as was so commonly done, be connected with the sewer by a drain-pipe. The houses should invariably be separated from the sewers by means of traps.

The speaker then studied a dwelling-house, beginning with the cellar and going upward, and presented practical points concerning plumbing and its defects.

PROFESSOR R. OGDEN DOREMUS demonstrated with apparatus certain points concerning the porosity of the material of which walls are commonly constructed, and the ease with which noxious gases can penetrate them and find their way to the apartments in which we live. He demonstated that a stream of ordinary street-gas directed against one side of a thick block of stone would pass through so that it could be lighted on the opposite side. He also showed that by blowing against the side of a brick wall, eight inches thick, and of the finest brick, the breath could be made to pass through, and extinguish a candle upon the opposite side.

He also illustrated the fact that gases will pass in opposition to pressure equal to the weight of a single atmosphere, thus showing that the water-trap, contrary to general supposition, was no barrier to the entrance of poisonous gases from the water-closet. For these gases there is no antidote. Their inhalation must be prevented. They could, however, be destroyed by chlorine, bromine, etc., and the decomposition should be effected before they have opportunity to enter the rooms in houses. For example, the sulphuretted hydrogen and other gases which could pass through the water in the goose-neck attached to the basin of the water-closet could be destroyed by throwing into the water a mixture of equal parts by weight of manganate of soda and sul-

phate of magnesia. The chloride of zinc was also efficacious. The solution of hypochlorite of soda (Labarraque's solution) might be employed.

Dr. Willard Parker spoke of the effect which pure air has upon typhus fever, of the appearance of diphtheria in this city after the water-supply was connected with the sewers, etc. He believed that diphtheria begins in what he called "sewer malaria." If the disease occurs, there is something wrong with the sewerage of the house in which it appears. He would cut off all connection between the water-supply for houses and the sewers.

Dr. S. O. Vander Poel thought it as necessary that physicians should be able to point out sources of defect in the sanitary condition of dwellings, as it was important to be able to recognize any disease which may make its appearance. He directed attention to one point overlooked by sanitarians, namely, that the city of New York has no proper soil-drainage.

Dr. E. G. Janeway said that in certain parts of the city soil-drainage was provided for, but it was by no means so general and efficient as it should be.

With reference to the development of diseases in houses due to sewer-gas proper, it was difficult to separate (1) the effect of sewer-gas from (2) the effect produced by particles of contagion which enter sewers and do not develop other than diseases like those from which they came; whether sewer-gas *without the pre-entrance of the poison* produced diphtheria, was a question. He had been impressed by the fact that the portability of diphtheria was far greater than usually admitted. He then referred to a case already reported, in which diphtheria was carried several hundred miles by a toy rabbit, and there communicated to a child, who died of the disease. [See Medical Record, vol. xx., p. 190.] We must correct the defective sewers, but at the same time we must not overlook the possibility of contagion being carried in clothing and articles used about the sick.

The question of the relation of typhoid fever to sewer-gas also came forward, and Dr. Janeway cited several cases which seemed to admit of the possibility, perhaps probability, of the transmission, in city houses, of the poison of typhoid fever from the sewers through the *medium of croton water used for drinking purposes*, rather than by way of inhalation, and so through the medium of the respiratory organs. In many of the investigations which he had made with reference to an outbreak of typhoid fever, serious defects in plumbing had been found, such as permitted the water-supply to be contaminated by sewage material. Special reference was then made to an institution in which fifty cases of typhoid fever occurred, and by means of the chloride of lithium test it was found that the water used from an old well, although five hundred feet away from the hospital, could be poisoned, and without doubt was the source of the contamination which caused the outbreak, for from it the water drank by the inmates of the institution was taken.

Dr. J. C. Peters referred to the filthy condition of the docks on account of the sewers emptying into them, and the prevalence of contagious diseases in their immediate locality. From these docks the sewer-gas is forced back into the houses, where it produces its poisonous effects. A remedy was to carry the sewers out to the end of the piers.

On motion by Dr. John G. Adams, the Academy tendered a vote of thanks to Mr. Wingate and to Prof. Doremus, for their instructive and interesting communications.

FIRST AID TO THE INJURED.

Dr. W. Gill Wylie brought this subject before the Academy, and stated the objects of the organization which had received already the indorsement of the medical profession in England.

Dr. Austin Flint offered a resolution, which was adopted, sanctioning the objects held in view by the society, and indorsing the efforts which it proposed to make for the instruction of those who might be called upon to give aid to the injured in an emergency.

The Academy then adjourned.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-Sixth Annual Meeting, held in Albany, February 7, 8, and 9, 1882.

TUESDAY, FEBRUARY 7TH — FIRST DAY — MORNING SESSION.

The society met, pursuant to adjournment, in the city of Albany, at 10 o'clock, A.M., and was called to order by the President, Dr. Abraham Jacobi, of New York.

Prayer was offered by Right Rev. Bishop Doane.

THE PRESIDENT'S INAUGURAL ADDRESS.

Gentlemen of the Medical Society of the State of New York: The third quarter of the first century of the existence of the Medical Society of the State of New York is just closing. The history of these seventy-five years, comprising almost the whole of the life of the Republic, and also the greatest possible changes in the development of medical science, is of vast importance. At the time when this society was formed, Bichat first thought of establishing, on a sound basis, a pathology of the tissues; in this the third quarter, such a pathology, though open to further evolution, reigns supreme. Those times were still periods of systems and schools; our own has succeeded in establishing medicine on the sound foundation of close observation of the histological elements and of experimentation. This society, though we cannot boast of revolutionizing medical thought, has participated in the general progress. Although it be true that in modern times a large number of those who have given an unusual splendor to the American name are connected with medical schools, yet when these schools were but few it was in the profession at large that the men of learning, progress, and reference were found, and, fortunately, even to-day this condition of things is not entirely changed, and the experience of a former period in Europe has, in part, repeated itself with us. This society owes its increasing influence and power mostly to those who never presided in the lecture-rooms. For it is a fact that we, the delegates of the county societies mainly, and the representatives of the profession, have had to rely less upon the co-operation of the schools than upon our own resources. It is true that the progress of medical education in our country has been due to the labor of the colleges, but this labor has been mostly involuntary. Less than one knows one will hardly teach. The teaching of the formerly acknowledged branches has improved and special branches of knowledge have been added to the curriculum. All this is known; but it

is also known that not always has the world been progressed. It is not long since a celebrated college publicly rescinded measures adopted with the view to securing better preliminary education on the part of the matriculants. The consciousness of the necessity of advancement has certainly rooted first in the profession at large, and not a few of the colleges have consciously or unconsciously obeyed the dictates of public opinion.

STATE BOARD OF EXAMINATION.

The profession for many years has insisted upon a change in the law which licenses practitioners of medicine. Perhaps it cannot be said that the medical schools ever opposed the establishing of a State Board of Examination, which alone would be authorized to convey the license to practise, the right of the colleges to confer diplomas notwithstanding. If it ever did, it is not probable that any college would now oppose any such movement which might be set on foot and result in the Legislature passing a proper law; for good colleges would not be afraid of their graduates not passing the State board, and no college would be willing to try to thwart the movement, through fear lest its unwillingness to co-operate might be recognized as, or alleged to be, the result of incompetency.

It is claimed by many that a co-operation with the homœopaths, for the purpose of arranging State examinations, would not be out of place to the same degree as it certainly was ten years ago. For there has, of late, been a tendency on the part of homœopathic physicians to recover from the incubus of Hahnemannian therapeutics. Dynamization by mixture and submixture, division and subdivision, is no longer sustained as a principle. "Similia similibus" is no longer claimed as a dogma, but a "proposition," as it was called by a correspondent of THE MEDICAL RECORD of November 26, 1881. Diagnosis is no longer declared superfluous, and the treatment of mere symptoms by the administration of medicinal agents, the effects of which have been estimated by the effects of large doses of the same agents observed, or believed to have been observed, in the well, is said to have been given up. Besides, the principles of medical science, anatomy, physiology, etc., are said to be taught and studied with them, as they are in our own schools. Thus it is claimed that now the questions of What is a homœopath? What is a medical man? cannot be answered at all. When asked What is a homœopath?—at least the correspondent in THE RECORD so answers—"Twelve persons would give you twelve answers." If that be so, it is not our fault, but that of those who are as anxious no longer to be called Hahnemannians, as they are to retain their exclusive title and denomination. We are told that homœopaths do not any longer practise "according to an exclusive dogma," but that, when the consideration of the question of homœopathy comes up among us, "the question of exclusive dogma falls;" but, even if it held, it would be our business, before recognizing their close fellowship, to show that, in addition, they reject the "aids" referred to in our code of ethics. That means that we have no right to refuse the fellowship of a homœopathic practitioner, when he tells you, or you have reason to believe that, besides his usual dosulæ, he may give, when he sees fit, ten-grain doses of calomel or twenty-grain doses of quinine.

SCIENTIFIC MEDICINE.

But homœopathy does not become scientific medicine by its adherents adopting all sorts of medicines, according to whim, alleged indications, convenience, or experience. The class of men who are so submissive to the desires or prejudices of the public as to offer treatment according to "either of the systems," or so uninformed as not to discriminate between scientific induction and the habits of routine, must not establish the standard of their logical therapeutics or professional ethics. At the time Hahnemann lived, the strict inductive method was not the basis of medical science and thought. When there were so many systems and schools, the founder of homœopathy had a certain ground for creating another from nothing or chaos. But the last thirty or forty years have worked radical changes in the scientific conscience and consciousness of modern medicine.

Not the last, however, of the branches of medical knowledge which have been modified by the modern current of medical thought and investigation, is that of our therapeutics. It has become experimental, and a part of experimental physiology and pathology. In this movement homœopathy has taken no part. In its old condition it had, at least, a rule and law; in its new form it has no shape, no steadiness.

A few weeks ago the Central Committee of the medical societies of Berlin, Germany, passed a resolution saying: "It is self-evident that medical men cannot consult with those who call themselves homœopaths." Now, every homœopathic physician is not of necessity an outright knave or an accomplished ignoramus. If he were the first, the question of fellowship between him and gentlemen could not be entertained at all. If he were ignorant, fellowship and the meeting at the bedside would not in itself be impossible. But, in the President's mind, if the question of consultation and fellowship were raised, there was an objection to every man who is not satisfied with the name of physician or medical man. Indeed, it appeared that homœopathic practitioners and societies began to feel as he did in this matter, for, the Homœopathic Society of Northern New York has dropped the word homœopathy. [MEDICAL RECORD, November, 1881.]

THE QUESTION OF CONSULTATION.

This question of consultation has often been raised. It was claimed that the sick man had a right to select his doctor. Certainly, but the doctor has a right to select his patient also. The patient knew beforehand that he could not expect a consultation between his homœopathic doctor and one of us, and he took his choice. From his youngest days onward he had had but one rule, and that was: to be governed by the law of his profession. The medical profession is not sufficiently supervised or protected by political laws, and has to make its own rules, and every member is expected to do his duty to them. The self-made rules of freemen cannot be too strict, and, though they may have been too strict sometimes, and he added, though they have been broken too often and scandalously by many whose position in life and standing in the profession might have been a safeguard against temptation, these strict laws have done an immense amount of good. So long as these laws exist, obey them; if the majority does not wish to obey them any longer, abolish them when the time has come. It is asserted by many that this time has come, and that there are good reasons for abolishing the boundaries between the several *classes* of medical men. I do not speak of *schools* of medical men, for modern medicine is not

divided into schools. If we have reason to believe, not only that medical science is one and indivisible and based upon logic and experimentation, but that the profession of the State of New York are sufficiently imbued with that spirit of logic and experimental science, we may overlook differences and meet, with a spirit of reconciliation, those who do not encounter us any more with the dicta of a school or a sect.

THE CODE OF ETHICS.

We are not the only class of what the State calls "lawfully qualified practitioners." It is in our interest, and has always been the effort of the professional men of the State, to better the condition of the profession and the public by the elevation of the standard of education. It is desirable that no part of the medical practitioners should be excluded either from the benefits of such efforts or from co-operating in that direction. It is absolutely necessary that in many steps to be taken before the legislature, we should be in full concord with those who share with us the honor of being called lawful practitioners. Such changes in our relations to those who still call themselves homœopaths could not possibly take place without abrogation of or amendments to the code of ethics. The consideration of that subject was in the charge of a special committee elected last year, and consisting of eminent and prudent men. Without good reasons, therefore, the society would not make a change. If every man were a gentleman, and every woman a lady, no code and few laws would be required. If the public be wiser, more dignified, and just than thirty years ago, all the paragraphs referring to the relations between the public and the profession might just as well not exist. But do not abolish the memory of those deserving and great men who wrote the book, whatever other action may be taken.

EXPERIMENTAL MEDICINE.

Amongst the other merits of the profession was its resistance to fanatical obstacles strewn in the way of quiet development of medical science. He hoped the time would never come when this society would cease to watch the fanatic who would fain gain a victory for his vanity and whims over experimental science.

THE WOMAN QUESTION.

This, the president believed, had been solved to the satisfaction of every one. No blame could be attached to the medical profession for resisting for a certain time full and free admission of women; but the truth was that the lay public was a more persistent opponent to it than the profession itself. It was only just that no one, male or female, should be prevented from earning his or her livelihood in whatever manner they please. Right is right under all circumstances and for everybody.

HYGIENIC MEASURES.

It will be a source of gratification to know in future that the medical profession has always stood in the front rank in the fight for the prevention of sickness. The fight will be a long one before the theory of humanism will be fully practised. It is true that it is no longer lawful to throw away new-born babies that were not washed, or throw to the bloodhounds the old, infirm, and moribund; but the study of what occurs every day, socially, publicly, officially, in the course of life, within the limits of law, under the rules governing industry and commerce, amongst the luxuriously rich and the abject poor, is still apt to make the humanitarian weep and the moralist blush.

"To live fast and in enjoyment, though to one's injury, and so perish fast, is better than to live in health long and sedulously. What is most to be feared is over-population and increasing competition. There is no harm in epidemics and wars cutting off the population annually; for, such is the charter of our times. The enthusiasts in the cause of public hygiene fight a battle, the aim of which is too high for me to see. In that respect I am myopic. I may admire the battle but cannot sympathize with it."

Who says that? A man who has been able to prove that supplying the medical profession of the world with books, and some good books, of performing old operations skilfully and devising new ones, does not redeem him from coarse thinking, brutal feeling, and vulgar talking—does not make a noble physician out of a mere operator and literary man. His name, I am sorry to say, is Billroth. Through him New York fanaticism will feel amply justified in trying to prove that the whole profession is imbued with the spirit of egotism and barbarism. In the face of such shocking vulgarity, in the presence of the noble profession of the State of New York, in the remembrance of the tendencies and aims of the most humanitarian profession in existence, I may be permitted to ask your co-operation in measures looking toward the cure of disease and the amelioration of the suffering of human kind.

SPECIAL HOSPITALS.

In this connection the president asked for the support which the Society might give, favoring the establishing of special hospitals for the treatment of scarlet fever and diphtheria within the limits of large cities.

The last topic to which the president directed attention was,

THE DANGER TO LIFE AND LIMB OF FACTORY CHILDREN.

Extended reference was made to the present laws governing the admission and regulation of the labor of this class of persons. He believed them to be inefficient, and recommended the enactment of a new law which should embrace the following points:

1. Children employed in factories should be under official supervision. In large cities boards of health could be entrusted with it.

2. Before being admitted to factory work, a child of legal age ought to be examined physically by a medical man. Chlorotic, anæmic, scrofulous, crippled, and phthisical children, and those under normal size for their ages, should be excluded.

3. No night or Sunday work should be permitted.

4. Some branches of work are to be forbidden entirely—those which are known to interfere with physical development, and others which are known to prove highly dangerous to childhood and adolescence.

The earliest age at which the young ought to be admitted to manufacturing employments is fourteen.

The address was closed with the following personal reference: "Twenty-eight years ago a young refugee from European hostility set foot upon the hospitable shores of this continent. The homeless wanderer is to-day your president; for, a year ago this week you elected him to the most honorable and honored position the profession of this great State can fill." Reference was then made to the influence of different forms of government upon the

subject, and the speaker said: "For I think that those who are born and bred in a republican community, where every one is the peer of the other, respecting his neighbor as and because he respects himself, is more apt to become also a conscientious citizen of the republic of letters and science. May that spirit remain intact and chaste for the last quarter of this century, and for centuries to follow, in the life of the Medical Society of the State of New York."

On motion the President's address was referred to a special committee.

ANNOUNCEMENT OF COMMITTEES.

The President then announced the following committees:

Business Committee.—Dr. D. B. St. John Roosa, of New York, Chairman; Drs. W. S. Ely, of Rochester; and C. R. Lee, of Fulton.

Committee on Credentials.—Drs. Robert Frazier, of Camden; F. R. Bentley, of Cheshire; and William Taylor, of Canastota.

COMMUNICATIONS FROM COUNTY MEDICAL SOCIETIES.

Dr. W. M. Carpenter, of New York, presented communications from the Medical Society of the County of New York, which were referred to the Committee on By-Laws and the Committee on Legislation.

REPORTS OF COMMITTEES.

Dr. Wey, from the Special Committee on the Revision of the Code of Medical Ethics, presented the report, which was made a special order for the evening session.

Dr. W. S. Ely, of Rochester, read the report of the

COMMITTEE ON PRIZE ESSAYS.

One essay only had been submitted, that entitled "Tubercle and Cancer," but it was not regarded by the committee as worthy of the prize offered by the society.

Dr. W. S. Ely also reported as

CENSOR OF THE COLLEGE OF MEDICINE OF SYRACUSE UNIVERSITY.

He was favorably impressed with the qualifications of the students, largely to be attributed to the graded system of instruction.

Dr. Daniel Lewis, of New York, offered the following resolution concerning the legality of

ASSESSMENTS IN COUNTY MEDICAL SOCIETIES.

Resolved, That this society be requested to give an opinion as to the legality of county medical societies levying assessments in excess of the annual dues prescribed by their by-laws.

Dr. S. O. Vander Poel thought it was a local question, to be decided by the county societies themselves.

On motion the resolution was laid upon the table.

Dr. S. B. Ward, Chairman of the Committee of Arrangements, proposed the following as

MEMBERS BY INVITATION.

Drs. E. C. Seguin, of New York; John B. Stonehouse, William Geoghan, Theodore P. Bailey, E. B. Tefft, and Lewis Balch, of Albany; and Lucius E. Felton, of Potsdam, N. Y.

HINTS AND SUGGESTIONS UPON MEDICAL EDUCATION,

was the title of a paper then read by Dr. F. R. Sturgis, of New York. The speaker took issue with the claim, so often made, that many of our best and most successful practitioners have come from among those who have not had the advantages of a thorough preliminary education. The relation which the question sustains to the profession and to the schools was discussed thoroughly and intelligently, and the position taken that the needed reform could never be secured by retrocession of college faculties from steps taken in advance, but by a united effort of the true lovers of learning and the promotion of scientific instruction such as accompanies a financial foundation that elevates every institution above the influence of self and the selfish action of all organizations raised especially for successful commercial pursuits. The paper also embraced an argument in favor of State medical examination as a necessary qualification for the practice of medicine, thus separating the right to practise from diplomas.

Dr. Roosa, of New York, spoke of embarrassments under which some of the medical colleges labored, of the low state of interest manifested by laymen upon the subject of medical education, of the disposition shown by some medical schools to decline any proposition looking toward a closer affiliation with a university, as among the obstacles to the more desirable organization of medical schools and the securing of the advancement so earnestly looked for upon the part of those who had been denominated reformers.

Dr. Perkins, of Schenectady, thought that the whole matter was largely in the hands of the profession itself, and that if every young man was urged to prepare himself a little more thoroughly before entering upon the study of medicine, much of what is now desired would in time be accomplished.

Dr. E. M. Moore, of Rochester, reviewed the subject at some length, and proposed the organization of a Board of Examiners, which should have a representative from each regular medical college in the State, together with a representative from the Medical Society of the State of New York, acting in the capacity of a medical school.

Dr. H. G. Piffard, of New York, thought that Dr. Moore's proposition would have a tendency to tie the hands of the regulars while the irregulars could go on without restraint, and we should go back to as bad a state of affairs as existed when county medical societies granted licenses to practise medicine and surgery.

Dr. Edward R. Squibb, of Brooklyn, then read a paper on

CLINICAL THERMOMETERS.

The aim should be to secure an instrument which gives a degree of accuracy sufficient to meet all the practical demands of the purpose for which it is used. Attention was directed to some of the sources of error in the construction of thermometers. The contraction of the glass of which the bulb is constructed raises the mercury so that the register is higher than it should be. A thermometer, therefore, should be seasoned for three years before it is graduated, as after that time the error is so slight that it need not be taken into consideration. Any physician can send to the Thermometrical Observatory at Yale College, where he can have his thermometer tested and graduated and certified to.

Certain rules were then given for the selection of thermometers, such as if the glass of the bulb be too thin the mercury will rise rapidly, whereas if it is too thick the mercury will rise slow. An average of six to eight minutes under the tongue should give

the complete elevation of the mercury, and it also indicates that the glass is of suitable thickness to resist ordinary exposures and accidents. A thermometer which fills its register within four minutes is almost certain to break should it fall upon the carpet. A five or six inch length thermometer is most convenient for reading.

The paper was discussed by Dr. Maurice Perkins, of Schenectady.

Obituary notices of Levan B. Cotes, by Dr. Potter, of Buffalo, and John F. Whitbeck, by Dr. H. H. Langworthy, were read by title and referred to the Committee on Publication.

The Business Committee suggested suspension of the by-laws so that the report of the Committee on Nomination could be made at the evening session in which the President's address is delivered. Objection being made, the resolution was not adopted.

Dr. W. S. Ely, of Rochester, then read a brief

NOTE ON BEEF-JUICE.

His method of extracting it was to take freshly chopped lean beef, heat it thoroughly with constant stirring, and then quickly transfer to a cylinder in which screw-pressure could be applied as in pressing fruit. The fluid thus obtained is red, has a specific gravity of 1032, acid reaction, and contains all the albumen and salts of the beef. It could be advantageously used as a substitute for defibrinated blood for rectal alimentation.

It should be heated to a degree less than that which coagulates albumen, namely, 60° C. or 143 F.

Dr. John P. Gray suggested the addition of claret or alcohol in small quantity, to prevent the early decomposition of the juice, and also as an addition to its medicinal or food value. Of claret, an ounce to the pint might be sufficient.

Dr. Ward, of the Committee of Arrangements, then announced the banquet to be given at the Delavan on Wednesday evening, after the President's address.

He also announced the following

MEMBERS BY INVITATION.

Brayton Babcock, Alleghany Co.; S. O. Vander Poel, Jr., John F. Lockwood, H. R. Starkweather, S. R. Morrow, C. F. Huddleston, Lorenzo Hale, John Thompson, W. J. Nellis, A. B. Huested, Otto Ritzman, P. J. Keegan, J. W. Gould, Albany; Samuel Peters, Cohoes.

The society then adjourned to meet at 3 P.M.

Tuesday, February 7th—Afternoon Session.

The society was called to order at 3 P.M. by the President.

The following were announced as the Committee on the President's Inaugural Address: Drs. E. M. Moore, of Monroe County, S. O. Vander Poel, of New York County, and John P. Gray, of Oneida County.

The first paper was read by Dr. S. O. Vander Poel, of New York, and entitled

THE PRESENT CONDITION OF THE TUBERCULOSIS QUESTION.

In this paper the author reviewed the opinions entertained by Niemeyer, Laennec, English observers, and others. Scrofula is the key to the explanation of the occurrence of phthisis in certain patients under certain circumstances, while in other patients it does not occur under like circumstances. How does scrofula become tubercle? At some distant part has originated a caseous change that has given rise to tubercle or another disease by infection. There is localization instead of a constitutional condition as the primary factor. Three varieties of phthisis were recognized:

1. Chronic pneumonia of one apex, with much dulness, slight râles, slight fever.
2. Broncho-pneumonia.
3. Catarrh of the apex.

The paper was discussed by Dr. E. M. Moore, of Rochester, and the President, and chiefly with refereuce to the essential nature of scrofula.

A biographical sketch of James P. Boyd, M.D., of Albany, by Dr. Thomas Hun, was referred to the Committee on Publication.

The President then announced the following as the Committee of Nominations:

From the Society at Large: Wm. C. Wey, of Elmira.

Elected by the Several Senatorial District Meetings: First District, Thomas R. Pooley, of New York; Second District, J. Foster Jenkins, of Yonkers; Third District, Norman L. Snow, of Albany; Fourth District, B. F. Sherman, of Ogdensburg; Fifth District, Wm. H. Johnson, of Port Leyden, Lewis County; Sixth District, C. L. Stiles, of Owego, Tioga County; Seventh District, John Gerin, of Auburn; Eighth District, W. W. Potter, of Buffalo.

MEMBERS BY INVITATION.

The following were elected: Drs. Franklin Townsend, of Albany; Edward H. Squibb, of Brooklyn; T. Z. Gibbs, of Fort Ann, and D. H. Goodwillie, of New York.

Dr. E. M. Moore, of Rochester, then reported a case of

EXTRAORDINARY BONE-DEVELOPMENT.

The paper will be published in full in a subsequent number of the Record. It was discussed by Dr. J. S. Wight, of Albany.

The next paper was read by Dr. E. C. Seguin, of New York, and entitled

EFFECTUAL DOSAGE OF CERTAIN REMEDIES IN THE TREATMENT OF NERVOUS DISEASES.

Especial attention was directed to the dosage of nitrate of silver, Duquesnel's aconitia, and conium. The doses which he had employed were larger than those usually recommended in text-books, as compared with those given by Stillé and Maisch, Nothnagel, Gubler, and others. He was very favorably disposed toward nitrate of silver in locomotor ataxia, and used it in from one-fourth to one-half grain in pill form, combined with extract of nux vomica or taraxacum, according to indications, before meals, t. d., for two months, and then allowed an interval of two or three months, to be followed by a shorter course. Given in that way, he had not seen any unpleasant effects in the way of discoloration of the skin, etc. With reference to aconitia, small doses, as with all potent remedies, should be administered to patients at first, in order to observe the susceptibility to the drug; as for example, $\frac{1}{100}$ or $\frac{1}{200}$ of a grain may produce marked physiological effects. One peculiarity which he had noticed with reference to locomotor ataxia was that such patients had not shown the physiological effects of the drug. He regarded aconitia as the best of our present resources in trigeminal neuralgia.

Concerning conium, he never gave it in less than twenty-drop doses of the fluid extract, frequently in

sixty to one hundred-drop doses, and that for the purpose of obtaining the paralyzing effects in special convulsive neurosis, such as chorea.

The paper was discussed by Drs. Squibb and Walter B. Chase, of Brooklyn; Dr. Gibney, of New York; Dr. Stoddard, of Rochester; and Dr. Allison.

Dr. C. S. Bull, of New York, then read a paper on

SYPHILITIC DISEASES OF THE LACHRYMAL APPARATUS.

The author referred to two published cases of syphilitic disease of the lachrymal glands, one in which he had observed it as the result of extension from the periosteum, and the other as syphilis of the caruncle, of which two cases had been reported by Dr. R. W. Taylor, and these he gave nearly in detail. He also spoke of syphilitic affection of the lachrymal sac and nasal duct, early and late manifestations, and the tendency of the duct disease to extend upward toward the sac. Osteo periostitic gummosa were also studied, and the treatment of the affection considered under the use of mercury and the iodide of potassium.

The paper was discussed by Dr. H. D. Noyes, of New York, who referred to the obscurity and persistence of certain lachrymal troubles in children, usually due to hereditary syphilis.

MEMBERS BY INVITATION.

T. L. St. John, of Troy; I. N. Goff, of Cazenovia; L. A. Tourtelott, of Utica; E. A. Bartlett, Wm. Hailes, W. G. Tucker, T. Featherstonhaugh, W. J. Levi, C. W. Greene, of Albany.

Dr. Lucius E. Felton, of Potsdam, exhibited

A NEW GALVANIC BATTERY.

Remarks were made by Dr. B. F. Sherman, of Ogdensburg, after which the Society adjourned to meet at 8 P.M.

TUESDAY, FEBRUARY 7—EVENING SESSION.

REPORT OF THE COMMITTEE ON REVISION OF THE CODE OF ETHICS.

The society was called to order at 8 P.M., and the following report of the Committee on the Revision of the Code of Ethics was made the special order of business:—

I.—THE RELATIONS OF PHYSICIANS TO THE PUBLIC.

It is derogatory to the dignity and interests of the profession for physicians to resort to public advertisements, private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor without charge, or promising radical cures; or to publish cases or operations in the daily prints, or to suffer such publications to be made; or, through the medium of reporters or interviewers, or otherwise, to permit their opinions on medical and surgical questions to appear in the newspapers; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform other similar acts.

It is equally derogatory to professional character, and opposed to the interests of the profession, for a physician to hold a patent for any surgical instrument or medicine, or to prescribe a secret nostrum, whether the invention or discovery or exclusive property of himself or of others.

It is also reprehensible for physicians to give certificates attesting the efficacy of patented medical or surgical appliances, or of patented, copyrighted or secret medicines, or of proprietary drugs, medicines, wines, mineral waters, health resorts, etc.

II.—RULES GOVERNING CONSULTATIONS.

Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.

To promote the interests of the medical profession and of the sick, the following rules should be observed in conducting consultations.

The examination of the patient by the consulting physician should be made in the presence of the attending physician, and during such examination no discussion should take place, nor any remarks as to diagnosis or treatment be made. When the examination is completed, the physicians should retire to a room by themselves, and after a statement by the attending physician of the history of the case and of his views of its diagnosis and treatment, each of the consulting physicians, beginning with the youngest, should deliver his opinion. If they arrive at an agreement, it will be the duty of the attending physician to announce the result to the patient, or to some responsible member of the family, and to carry out the plan of treatment agreed upon.

If in the consultation there is found to be an essential difference of opinion as to diagnosis or treatment, the case should be presented to the patient, or some responsible member of the family, as plainly and intelligently as possible, to make such choice and pursue such course as may be thought best.

In case of acute, dangerous, or obscure illness, the consulting physician should continue his visits at such intervals as may be deemed necessary by the patient or his friends, by him, or by the attending physician.

The utmost punctuality should be observed in the visits of physicians when they are to hold consultations; but, as professional engagements may interfere or delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting physician, he should retire, except in an emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in writing and under seal, to be delivered to his associate.

III.—THE RELATIONS OF PHYSICIANS TO EACH OTHER.

All practitioners of medicine, their wives, and their children while under paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired.

Gratuitous attendance cannot, however, be expected from physicians called from a distance, nor need it be deemed obligatory when opposed by both the circumstances and the preferences of the patient.

The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, may require him

temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy which should always be performed with the utmost consideration for the interests and character of the family physician, and, when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But, if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Diversity of opinion and opposition of interest may, in the medical as in other professions, occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians before appealing to a medical society or the law for settlement.

If medical controversies are brought before the public in newspapers or pamphlets, by contending medical writers, and give rise to or contain assertions or insinuations injurious to the personal character or professional qualifications of the parties, the effect is to lower in the estimation of the public not only the parties directly involved, but also the medical profession as a whole. Such publications should therefore be brought to the notice of the county societies having jurisdiction, and discipline inflicted, as the case may seem to require.

After considerable discussion, during which a substitute by Dr. Roosa was offered and lost, the report was finally adopted. The meeting then adjourned until Wednesday morning.

(To be continued.)

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 29, 1882, to February 4, 1882.

Woodward, Joseph J., Major and Surgeon. Granted leave of absence for six months, on surgeon's certificate of disability, with permission to go beyond sea. S. O. 23, A. G. O., January 30, 1882.

Summers, Jno. E., Lieut.-Colonel and Surgeon, Medical Director Department of the Platte. Leave of absence further extended one month. S. O. 20, C. S., A. G. O.

The Meaning of Keith's Abandonment of Listerism.—According to a correspondent of the *Boston Medical and Surgical Journal*, Mr. Keith, in announcing at the International Medical Congress his abandonment of the spray, failed to state a very important fact. This was, that he had been using a solution of carbolic acid one-tenth stronger than that prescribed by Lister. It is claimed that in fairness he should have made this statement. On the other hand, Lister's failure to make any satisfactory reply is ascribed in part to his not being acquainted with abdominal surgery.

Medical Items and News.

Treatment of Syphilis by Hypodermic Injection.—In the formula given for the use of bichloride of mercury with peptone and ammon. chlorid. (Medical Record, December 24, 1881), our attention has been called to the fact that the amount of glycerine and water is insufficient. This can be increased, however, according to the judgment of the pharmacist or physician. The main thing is, of course, to get a clear, non-irritant solution, which is to be injected in doses of gr. $\frac{1}{25}$ to gr. $\frac{1}{5}$.

French Report on the Hygiene of Schools.—In June last the French Minister of Public Instruction appointed a commission to inquire into the causes of the rapid increase of myopia among school-children. That commission has made its report, which contains a number of suggestions regarding light, desks, writing utensils, books, etc.

Prognosis in Metastatic Parotitis.—Dr. John A. Wyeth, of this city, writes: "Apropos to the interesting article on 'Metastatic Parotitis,' by Dr. R. C. M. Page, in The Record, is a case of double parotitis complicating typhoid fever, occurring in the service of M. Laboulbène. Patient, aged seventeen, recovered. Also a quotation from Trousseau's *Leçons Clinique*, in which he says, 'I have never seen a patient recover who was thus affected.'"—*Gazette des Hôpitaux*, No. 87, 1881.

Diploma Manufacture in Detroit.—Dr. H. S. Thomas, the Michigan Avenue cancer doctor, with others, have organized an affair which they term "Detroit University," capital $30,000, of which $15,000 is paid in the form of notes signed by the several stockholders. The University will confer degrees in law, theology, and medicine. It is stated that Thomas offered the degree of LL.D., to the lawyer who witnessed the articles. Some days since one of the announcements of the above affair was presented to our notice. As the late Dr. Buchanan, of Philadelphia, was not long since the guest of Dr. Thomas, while playing "hide and seek" with the detective, it is easy to see whence the inspiration of this new "university" springs. It seems more than probable that Detroit will have a genuine diploma-mill. Is there any law to prevent it? None with which we are acquainted.—*Detroit Lancet.*

Professor Freund, of Strasburg, has been offered the Chair of Obstetrics in Breslau, vacant by the death of Professor Spiegelberg, and has, it is reported, accepted it.

Fire and Blood.—It used to be said, somewhat aphoristically, that Broussais recognized as the cause of all diseases, inflammation, and as the cure, bloodletting. He was called, consequently, the doctor of fire and blood.

Philadelphia Societies.—The officers of the Philadelphia County Medical Society recently elected for 1882 are: President, H. Y. Evans; Vice-Presidents, Charles K. Mills, John B. Roberts; Treasurer, William M. Welch; Recording Secretary, Henry Leffmann; Reporting Secretary, Frank Woodbury; Corresponding Secretary, H. Augustus Wilson; Assistant Secretary, J. D. Nash; and Librarian, M. O'Hara.

The officers of the Pathological Society of Phil-

adelphia are: President, S. W. Gross; Vice-Presidents, James Tyson, J. Solis Cohen, F. P. Henry, J. Ewing Mears; Secretary, S. F. Hazelhurst; Treasurer, M. S. French; Recorder, C. B. Nancrede; Curator, Carl Seiler.

Polluted Well Water and Typhoid Fever.—Dr. C. R. Agnew of this city writes: "You will remember that typhoid fever has been quite prevalent through Kentucky and Tennessee, and especially connected with that condition of water-supply which follows a drought. Last summer the drought was prolonged, and the typhoid fever correspondingly prevalent. Dr. W. O. Sweeney, of Lexington, Kentucky, Professor of Chemistry in Hamilton College, in that city, has told me that he has the records of eighty cases occurring in his practice during 1880 and 1881; that *not* one of the cases occurred in persons using cistern-water; that all had used well- or spring-water; that he had traced seven cases directly to one polluted well. Of course we know that such statements are not new. They are interesting, however, as a contribution to the subject."

A Spanish Medical Congress will be held at Seville, April 9, 1882. Preparations have been made on a large scale for the successful carrying out of the meeting. The programme of subjects proposed for discussion includes: the relations of animal heat to the nervous system; urea; illuminating apparatus; tuberculosis; infant mortality; prevention of scrofula; action of common air as a medicine; heat as a medicine; diabetes; antiseptic treatment; color-blindness; strabismus; and a number of other topics under almost all of the different specialties.

Bismarck as a Patient.—The Prince's chief trouble, as is well known, is sciatica, and it is greatly dreaded on account of its obstinacy. Besides this, the Chancellor suffers at times from an inflammatory swelling of the veins in the feet, and, like all other mortals, occasionally from lighter indispositions—colds and indigestion. It seems that the patient is as inconsistent regarding the methods of his treatment as he is in other matters. With the same feeling of "absolute indifference" which, according to his own words, he manifests in certain political topics, he also deals with the exigencies of the medical science. Homœopathy or allopathy—it is all one to him, so long as he believes one or the other will cure him. It has even happened that he allowed himself to be treated by an allopathic physician, and soon after by a homœopathist. When at Friedrichsruh, he sends for Privy Sanitary Councillor Dr. Dohn, of Hamburg, who is an allopath. At Varzin, when medical attendance is needed, the physician, also an allopath, in the adjacent town of Schlawe, is applied to. When at Kissengen, the Prince consults the well-known Dr. Dirnf, also an adherent of the old school. During his stay at Berlin, however, he inclines to homœopathic treatment. —*American Register.*

Some Agreeable Iron Preparations that should be Introduced into America.—Dr. George L. Walton, in a letter to the *Boston Medical and Surgical Journal*, highly recommends certain German preparations of iron, and urges their introduction into America. These preparations are "Ferrum oxydatum saccharatum solubile" or "Iron sugar," Tinctura ferri pomata, and Syrupus ferri pyrophosphorici cum ammonio citrico.

The "Iron sugar" is a very elegant preparation. It is a light brown, sweet-tasting powder, soluble in water, but it can be taken in its natural form. It does not discolor the teeth, and may be taken for any length of time without disturbing digestion. It may also be taken with milk. The full directions for preparing this, as well as the other preparations, are given by Dr. Walton.

Chian Turpentine in Cancer.—At a recent meeting of the Baltimore Medical Association, Dr. John Morris had been using this agent in a case of epithelioma of the cervix uteri. He found that the sample obtained in this city was very different from that used by Clay. Pills of the former passed unchanged through the bowels, while those made from the preparation which he had ordered from England dissolved readily. Another characteristic of the latter preparation was the very marked diuretic action which it produced. He did not regard the domestic preparation as a genuine article. He had not used the agent sufficiently to speak yet of its value in the case referred to; the only change noted after the use of one ounce) was the less amount of opium required by the patient.—*Virginia Medical Monthly.*

How to Distinguish Saliva-Spots in Clothes from Others of Similar Appearance.—Dr. Cervera (*Rev. de Med. y Cir. Pract.*) gives a simple mode of distinguishing salivary stains from spermatic and others of similar appearance with which they may be confounded. This distinction is often of importance in medico-legal cases. The piece of cloth containing the spot is by capillarity moistened with a saturated solution of ferric chloride; chemical reaction will give rise to a blood-red color in the case of saliva, but not in stains due to other fluids. Carotid saliva, especially after meals, contains the sulphocyanide of potassium, a suostance which strikes an intense red color in contact with ferric salts, although these may be present only in minute quantity. Such reaction does not take place in the case of saliva, nasal or vaginal mucus, spermatic or gonorrhœal fluid.—*Cron. Med.-Quir. de la Hab.*

Treatment of Amygdalitis and Tonsillar Hypertrophy by the Bicarbonate of Sodium.—Dr. Armengué reports seven cases of angina tonsillaris cured in less than twenty-four hours by the bicarbonate of sodium (?). This, therapeutic measure was known to Professor Gine, who employed the remedy both in the form of a powder and as a local application. The author asserts that frequent applications in tonsillitis and tonsillar hypertrophy will produce immediate amelioration in the majority of cases, while, in other instances, cure results in a little while. It is most efficacious when applied during the decline of the inflammation, although Dr. Armengué has succeeded with it in aborting the morbid process. The bicarbonate does not diminish the predisposition to angina, but arrests its development. Amygdalotomy the author believes to be a useless operation.—*Gazz. Med. di Roma.*

Mechanical Therapeutics.—A company has been formed to introduce Dr. Zander's system of mechanical therapeutics into London. Zander has practised his system in Stockholm successfully for many years. A description of some of his machines and appliances has appeared in The Medical Record. There is no doubt of the usefulness of this method of treatment in many forms of disease.

Original Lectures.

ON THE EXTRACTION OF CATARACT.

CLINICAL REMARKS MADE BEFORE THE CLASS OF STUDENTS AT THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE.

By HERMAN KNAPP, M.D.,
NEW YORK.

GENTLEMEN: Since the opening of the present winter course—October 12th—thirty extractions of cataract have been made in this hospital, namely, one by Dr. Born and twenty-nine by myself. You have not only witnessed the operations, but also watched the after-treatment and the course of healing in all of them, and you know that there was no failure. The last operation having been made on the 15th of December, it may now be opportune to hold a general retrospective survey, while the details are still fresh in our memory.

All the cataract extractions performed at this institution are entered and described in a special record-book, according to the schedule adopted at the meeting of the American Ophthalmological Society in 1872. This book, containing the detailed histories of over 400 extractions, I place before you, and will do so as willingly before any one who may desire to use it for scientific purposes. From it I have made a synopsis of our last thirty extractions, to serve as a basis for some comprehensive remarks.

The *youngest* patient was a servant girl, aged thirty-two years, whose cataract I would, under ordinary circumstances, have operated on by division, but as she was blind in both eyes, had only recently come to this country, and was without support, I preferred that operative procedure which restored her sight in the shortest time. There were three patients between forty and forty-eight years of age. The remainder were over fifty. The oldest was eighty-two.

The *method* was a *more or less linear or low-flap section, with a broad iridectomy, and peripheric opening of the capsule.* In the first operations, I showed you Graefe's section, beginning and terminating one millimetre in the corneo-scleral junction, its apex being at the transparent margin of the cornea, or even one to two millimetres below it. Gradually I shifted into the flap-section which De Wecker of Paris recommends as the best, namely, a section with a Graefe's knife, situated exactly in the transparent margin of the cornea, extending over its upper third. For full-sized cataracts, I made it somewhat larger. Gentlemen, both sections—the linear and the flap—have their advantages and their disadvantages; the linear does not incline to tilting, and shows a very accurate coaptation, but as its ends are nearer to the insertion of the iris, it is more liable than the flap to adhesions and incarcerations of the iris and to cyclitic processes. With regard to firm closure of the wound, one of the most important factors in the whole operation, the flap, though easily gaping during the operation and soon after it, has one redeeming quality—it cuts the lamellæ of the cornea obliquely, not at right angles, as the linear section does. You know that this principle of oblique piercing is frequently made use of, and with admirable ingenuity, in the animal organism. Let me only remind you of the ductus choledochus piercing the wall of the duodenum obliquely, by which contrivance the bile can, without obstacle, flow into the gut, but the food, while passing from the pylorus onward, will press the inner wall of the valve-like opening of the bile-duct against the outer, and thus completely close the aperture. Somewhat in the same manner the inner lip of the flap-section is pressed against the outer by the contents of the globe, whereby a firm and lasting closure may be established. Theorizing is a fine thing in its way, but worthless without the test of experience, because in complicated problems we commonly fail to know and appreciate the quality and quantity of all the co-operating factors. Wecker's section has thus far shown us very kind healings, encouraging to further trial.

The *iridectomy* in almost all of our operations was large. When the corneal section and the opening of the capsule are peripheric, it must be large, or the columns of the coloboma will be an obstacle to the exit of the lens, which, if overcome by force, entails bruising and incarceration of the iris. When the iris is being cut, it ought not to be dragged with the forceps into the corners of the section, since there the lips of the wound act like clamps, holding the iris-tissue tight between them. It is good practice to seize the iris in the centre of the section, draw it straight up and cut it off close to the cornea—carefully avoiding the corneal tissue itself—in one, two, or three strokes, as may prove convenient, and afterward, according to the sufficient or insufficient size of the coloboma, either reduce or exsect iris-tissue which may still lie in the corners. Such tissue, even after a clean and apparently satisfactory iridectomy, remains hidden in the wound more frequently than we imagine. Proofs: 1. The anatomical examination of eyes on which iridectomy had been made for glaucoma, or combined with cataract extraction, commonly found the stump of the iris or its adjacent tissue united with the corneal scar, even if no outward inspection could discover such a condition. 2. Many times, when passing the cystotome from the corners of an apparently unobstructed corneal section toward the centre, I drew iris-tissue along, which was either the periphery of the adjacent iris, or the stump of the part which had been removed. Such portions, of course, have to be grasped with the forceps and cut off. This observation has taught me not to rest satisfied with an apparently correct coloboma, even if its sphincter edges are in the anterior chamber, but, before opening the capsule, to clear the whole extent of the corneal section, especially the corners, of iris-tissue, which, with a delicate probe or spatula, may be stroked back into the anterior chamber.

When the wound is clean the operator takes the fixing forceps in his own hand, presses gently with it on the globe, so as to make the corneal section slightly gape, and *passes the needle cystotome* (see Fig. 1) *from the inner corner of the section to the outer, through the anterior capsule of the lens.* This manœuvre has to be closely watched; a far-sighted operator should make himself near-sighted by convex spectacles, and either daylight or artificial light ought to be thrown on the eye by a large convex hand-lens, so that the point of the cystotome can be accurately followed in its course through the capsule. An insufficient capsulotomy is commonly without consequences, as the cataract on its way out enlarges the opening; only in tough capsules it is an obstacle to the expulsion of the lens, and may lead to prolapse of vitreous. When I had practised this

mode of opening the capsule in about two hundred cases, I varied it, not because I was dissatisfied with its results, but in order not to get wedded to one particular procedure. There is no conceivable way of opening the capsule that has not here and there been tried. The one just described is the simplest in execution and the least injurious to the eye, but it has the disadvantage of necessitating, in the majority of cases, an after-operation, viz., the subsequent central splitting of the capsule. In order to avoid that, I have lately joined to the horizontal division a larger vertical one than I made a few years ago while practising a T-shaped opening. A bent needle cystotome is introduced into the anterior chamber, and the capsule slit open from the lower edge of a middle-wide pupil, up to the centre of the corneal section. In order not to let the outcoming lens enlarge the upper end of the capsular wound irregularly, I made the horizontal incision in one case with a delicate, sharp-pointed scalpel, the point of which was inserted into the upper end of the vertical incision of the capsule at the centre of the corneal section, pushed forward toward one corner of the wound, and then, by raising the hilt, one-half of the upper margin of the capsule was ripped open. In the same way the other half was dealt with. In another case I made the horizontal incision of the capsule with the needle cystotome, which was passed first from one, then from the other corner of the corneal section through the capsule, so as to meet the upper end of the vertical capsular section. If the cystotome were passed from one end of the section to the other, it would split the first half of the capsule, but most likely not the second, for when fallen into the vertical section it would enlarge this by dragging the capsule before it rather than cut it. The few cases thus operated on did well; the first one showed some transient adhesions of the iris to the shreds of the capsule. It remains to be seen whether a greater number of cases will yield as smooth recoveries, and better permanent vision, than the other now well-tried method.

Fig. 1.—Noelle Cystotome.

The *expulsion of the lens* is effected by pressing with a hard-rubber spoon on the lowest part of the cornea. You know it was always easy, and it was complete in all but a few cases, in which remnants had to be squeezed out with the lower lid. Only one accident occurred in all the thirty extractions. The cataract was a very complicated one: corneal opacities and partial adherent leucoma from disease in childhood and almost lifelong trachoma; the upper part of anterior chamber deep. The other eye was blind from irido-choroiditis. Fair perception of light in the first eye, and total helplessness of the patient, a woman fifty-five years of age, determined me to give her the chance of recovering so much sight as to find her way alone. This was obtained. By an oversight, which now has happened to me four times, I held the back of the knife up instead of down, and was aware of it only when the counter-puncture was made. As in the other cases, I pushed the knife through as far as possible, then turned it one hundred and eighty degrees on its axis, and completed the section as if the cutting edge had been turned up from the start. As soon as the section was finished, the lens was thrown out in its capsule, together with a moderate quantity of vitreous. I at once removed the speculum, closed the eyelids for a few minutes, then carefully cut off the protruding iris and replaced a small part in the inner corner which I could not cut. The wound thus being perfectly clean, I applied the bandage. It healed without any reaction, and the patient was discharged on the fourteenth day with S. $\frac{6}{60}$. In this case, evidently the zonula Zinnii had been frail and defective. The low acuteness of vision was chiefly owing to the old opacity of the cornea, but probably also to opacity of the vitreous, and will no doubt still somewhat improve.

With regard to *reactive processes*, there was *iritis with spongy exudation*, accompanied by repeated after-hemorrhage, in one case—that of an old man, whose other eye had been successfully operated on a year previously. He had no particular pain, but became homesick, and could not be kept longer than three weeks. He went home before the pupil had cleared up, with S. $\frac{6}{60}$, and has not been seen since. I am going to write him, for I trust he will have good sight in that eye also.

Two cases showed *thickening and opacification of the capsule* (capsulitis) without iritis or cyclitis. They recovered good sight by subsequent division of the capsule.

One case, a gentleman seventy-six years of age, from Philadelphia, showed the greatest reaction of all. He was excessively irritable, and could not abstain from violently pressing his lids together, both during the operation—which, however, was without any accident—and afterward when the bandage was changed. On the tenth day he complained of nightly pain; the ciliary region was injected, and the pupil somewhat dull. Leeches, atropia, and anodynes kept the inflammation down, yet in several days a whitish infiltration and mucoid tissue made their appearance at the outer corner of the wound, starting from a portion of incarcerated iris. Ten days later, three weeks after the extraction, the incarcerated iris formed a conical projection, which I seized and cut off. After this little operation, the mucoid tissue and whitish infiltration disappeared from the wound, the patient felt more and more comfortable, and returned home five weeks after the extraction, his eye almost completely white, his pupil, however, still obstructed, though free from adhesions. His vision was $\frac{6}{60}$, easily to be improved by a division of the opaque capsule.*

Two other cases are noteworthy, and may, in a few words, be recalled to your minds. The one was that of a traumatic dislocation of the lens into the anterior chamber, where it had lain six years, at length producing glaucomatous symptoms. It was extracted by a superior flap-section. A moderate quantity of vitreous escaped, as was expected. Healing undisturbed; patient discharged with S. $\frac{6}{60}$.

The other case was that of a lady, eighty-two years of age, who for thirty years had had chronic iritis. Four years ago I made an upward iridectomy in both eyes to put a stop to the constant relapses, though one eye had already lost all perception of light. My object was attained; and as the cataract in the other was now so far advanced that fingers could be recognized only indistinctly, I extracted the lens through a full-sized superior section. Before opening the capsule, I enlarged the coloboma by exsecting a piece of the adjacent iris

* This was done January 18th, and to-day, January 22d, the patient's S. is $\frac{20}{70}$, and he reads finest type.

on both sides. This gave a large coloboma, admitting of a broad peripheric opening of the capsule, and a very easy and complete exit of the lens. The healing was without any reaction. Three weeks later I divided the capsule just above the original pupillary membrane, which I did not disturb at all, obtained a perfectly clear new pupil of 4 mm. in diameter, and discharged the highly delighted old lady, a week later, with S. $\frac{20}{x}$, though the ophthalmoscope discovered still a good many floating opacities of the vitreous. This, gentlemen, I think is *the* method of operating for *cataracta accreta*.

I pass over to the *visual results*, so far as they can be determined at so early a date.

The primary vision, viz., that tested on the day of discharge of the patient, was S.$=\frac{20}{30}$ in 1 case, $\frac{20}{50}$ in 2, $\frac{20}{70}$ in 3, $\frac{20}{100}$ in 7, $\frac{20}{150}$ in 4, $\frac{20}{200}$ in 7, $\frac{20}{300}$ in 1, $\frac{20}{400}$ in 3, $\frac{20}{500}$ in 1, $\frac{20}{600}$ in 1. We see that 24 out of the 30 obtained good, and 6 imperfect vision; among the latter, three cases were so complicated that good vision was impossible; one, the lady of eighty-two years, with the cataracta accreta, has already had her vision raised from $\frac{20}{600}$ to $\frac{20}{70}$ by a subsequent division, and two more can fairly expect good sight. In eleven cases I have already made after-operations, which brought S. to $\frac{20}{30}$ in a case of S.$=\frac{20}{70}$, and gave corresponding improvement in the other cases except one, where I, perhaps too persistently, endeavored to cut or tear a tough central band in the capsule. The patient's sight was lowered from $\frac{20}{70}$ to $\frac{20}{200}$, yet the pupil above and below the central band is clear, and when the reaction has passed, his sight will probably be more than $\frac{20}{100}$. He had some cyclohyalitic reaction, and was discharged yesterday, two weeks after the second operation, his eye in no danger, but not cleared up yet.

In all the other cases the after-operation was followed by no irritation, and the patients were discharged on the fourth or fifth day.

The *after-operation*, the subsequent central division of the capsule, is an essential feature in this mode of operating for cataract. Without it the method could not stand, as it has also virtually been abandoned by the operator who first, in 1873, tried it on a larger scale, namely, Professor Gayet, of Lyons. He made no after operations, and was dissatisfied with the imperfect visual results. The empty capsule will wrinkle and opacify, requiring subsequent splitting in the majority of cases. But then, gentlemen, the visual results are permanently good, and better than by any other method, except the removal of the lens within the capsule, which, according to its warmest advocate, Dr. Herman Pagenstecher, is indicated in thirty per cent. of the patients only. But do the methods with central opening of the capsule, even in their successful cases, commonly yield good vision permanently? By no means. With them, too, the capsule will wrinkle and opacify, and vision be reduced to a surprising degree. As an example I may remind those of you who attended last winter's course, of the case of a lady from this State, who, a year previously, had been operated on by no less a man than Professor Schweigger, in Berlin. The operation had proved perfectly successful, and the lady could read fine type—for three months. Then her vision became worse and worse. When she came here, it was only $\frac{10}{200}$. The anterior capsule showed a central aperture, the edges of which were united to the posterior capsule, and the whole capsular diaphragm, though not thickened, was so much wrinkled and uneven that only a dim and distorted image of the fundus could be obtained. A division of the capsule gave her in five days "better sight than she ever had before," namely, $\frac{20}{x}$, which, as she lately wrote to our matron, has not diminished either in sharpness or power.

The subsequent division of the capsule comprises not only its anterior but also its posterior half, and therefore gives a perfectly unobstructed pupil. The imperfect visual results after the primary central division of the anterior capsule have always been felt by the profession and given the incentive to different attempts at obviating this disadvantage, among which I will mention the puncture of the vitreous immediately after the expulsion of the lens, which Professor Hasner, of Prague, has made for many years, and which, as I saw last summer, has been adopted, on trial at least, by Schweigger. Both gentlemen assert that this procedure is not dangerous, but neither has, as yet, published statistics to convincingly support their assertion. The subsequent division of both capsules is an innocent operation. I have done it more than a hundred times; only in a few cases the reaction from it lasted longer than a few days, and never was the vision made worse. The technique of the operation, however, is peculiar and has to be learned. The operation requires, above all, two things, without which nobody should undertake it: first, *good artificial light*, thrown on the eye with a large lens, so that during the operation every wrinkle, dot, and stria of the capsule can be seen, as well as the course and effect of the needle; secondly, a *sharp, well-proportioned scalpel needle* (see Fig. 2) with which the capsule can be cut without tearing. I first make a horizontal incision, then a vertical one, varying them, however, according to the conditions of the capsule. No aqueous should, none need escape. You have often seen the little operation; moreover, I have described it in the *Archives of Ophthalmology;* I will, therefore, no further dwell upon it.

FIG 2.—Scalpel-needle.*

Now, in conclusion, a word or two on *antisepsis in cataract operations*. I have never thought much of the specifically antiseptic *substances* which ophthalmology has recently borrowed from general surgery, and I cannot yet see any reason to change my opinion. If the adherents of the antiseptic method affirm that this essentially consists in the careful observation of all the rules that secure or at least favor union by first intention, they have no warmer friend than me. Those rules, you know, are no modern revelation, and in no operation have they been more carefully studied than in the extraction of cataract. If, however, antisepsis means "bacteria-killing"—to express it in one word—and its advocates assert that all their methods and antiseptic substances employed before, during, and after the operation have this fundamental aim and object, then I think they hunt a phantom. I am far from denying the existence of micrococci and bacteria; they are on and in all open, moist tissues, though the conjunctival sac shows them less than most other places (see Wernich's instructive book, "Die Desinfectionslehre"). I do not, of course, deny the existence of infectious substances, such as blennor-

* Reliable needles of this kind, as well as the above-described cystotome, are made by Tiemann & Co., Reynders & Co., Ford & Co., in New York; Lüer, in Paris; and others.

rhoic, even dacryocystitic, and similar secretions, as well as decomposed and fermenting bodies; but, gentlemen, these substances are but *one group of irritants*, which, as all the others, ought carefully to be guarded against. Besides them, there are plenty of mechanical and chemical irritants, which have equal claims on our consideration. The great modern dictum, "No suppuration without bacteria," which was, until quite recently, ardently defended, has proved untenable; even its most zealous advocates had to concede that croton-oil and other substances produced suppuration without any co-operation of bacteria. One of the latest investigators of this subject, Dr. N. Uskoff, answers the question whether or not suppuration is possible independently of low organisms, positively in the affirmative (*Virchow's Archiv*, vol. lxxxvi., p. 150, etc., October, 1881), and does so, not from theoretical speculation, but based upon numerous experiments made by him and Professor Pontick at the Pathological Institute of the University of Breslau. Some weeks ago, gentlemen, while discussing this subject before you, I read you a passage from Lister himself, who, in closing the discussion on this subject at the last International Medical Congress, said: "Solid bits of dirt are the great sources of danger rather than certain invisible particles that float in the air, and have, perhaps, been invested with more deleterious functions than they really possess" (*British Med. Jour.*, October 1, 1881, p. 550).

The antiseptic methods which have conquered, for good reasons, the greater part of the surgical world, have also many adherents among the first names in ophthalmology. I will mention to you only Wecker, Horner, Snellen, Leber, H. Pagenstecher. Alfred Graefe, whose early paper on the subject in Graefe's *Archives* has made so many converts, had the mortification to see that the good results, not to say the good luck, which had attended his earliest antiseptic procedures, had unaccountably deserted him later, so that he is said to have become sceptical. Horner stated in London that, apart from antiseptic precautions, success depended upon the most delicate execution of every step of the operation. Now, what has *experience* to say on the question of antiseptics in ophthalmology? Where are the all-important statistics to support it? Gentlemen, they have not yet come forward. The best operators, *e.g.*, Wecker and Horner, still concede one per cent. to two per cent. of total loss by suppuration. This is a less percentage than the old flap showed, but not less than is obtained by a careful execution of Graefe's extraction without antiseptics, and the results in this institution for years have been no worse. There were two cases of suppuration in the last hundred extractions I reported on. Since then—March 3, 1880—fifty-two extractions were performed without the occurrence of suppuration, even without the loss of an eye from any cause. Several larger series of operations, performed under antiseptic precautions, have been published (Just, Reymond, and others) which are quite unfavorable. Yet this subject is still under discussion, and, though I am not prejudiced in favor of the bacteria-killing contrivances, I shall not tire in giving the question how to secure healing by first intention, how to avoid inflammation in general, my undivided attention. In order not to judge of the subject without personal experience, I shall continue to give antisepsis a fair trial until facts sufficiently numerous pronounce their unambiguous verdict. Every alternate operation in the thirty cases which you have witnessed, and which were the basis of these remarks, was, you know, performed under antiseptic precautions. Though I shall have to return to this subject later, I may here state that a difference in the course of healing has not been apparent, and, if you asked me my candid opinion, I would say that the best antiseptic is twenty years' experience. I do not say this *pro domo*, nor to discourage you, for Instruction wants less time to transfer a large stock of knowledge and skill, than Industry requires to accumulate it; and I, whom you have asked to teach you, have almost as much to learn as you have yourselves.

Original Communications.

DRAINAGE-TUBE IN THE CHEST FOR TWO WEEKS.—RESECTION OF A RIB NECESSARY FOR ITS REMOVAL.

By ROBERT ABBE, M.D.,

SURGEON TO THE OUT-PATIENT DEPARTMENT NEW YORK HOSPITAL.

One of the risks attending the drainage of large cavities by rubber-tubing, if imperfectly guarded, is illustrated by the following case:

A boy, nearly five years of age, was the subject of empyæma of the left pleural cavity, for which his physician incised the chest-wall in the eighth intercostal space two months ago. There was a free evacuation of pus, and a drainage-tube was inserted. This served well for six weeks, when one morning, on changing the dressing, the tube could not be found. The mother had frequently noticed that, on coughing or deep breathing, it was sucked in or

pushed out a couple of inches, and felt sure it had slipped in in this way. The child then began to cough "almost every five minutes;" the sinus became smaller, pus was poorly evacuated, and hectic set in. Two weeks later I was sent for by the physician to remove the tube "if it was in the chest."

January 28, 1882.—The boy was etherized. On examination I found a sinus over the ninth rib, in the axillary line. The bone was bare, and a probe passed above it, into the pleural cavity, but revealed nothing that felt like a tube. The sinus was dilated, and dressing-forceps, curved and straight, were used without discovering the tube. As the eighth interspace was much too small to admit the finger for exploration, I excised one inch of the ninth rib after the following method: An incision, two inches long, was made down to the bone. Its periosteum was stripped back and the rib gnawed away by rou-

geurs and Langenbeck's gouge until its entire thickness, one inch in length, had been removed. Considerable care was required in pressing the periosteum and pleura away from the internal face of the rib. The original sinus, in the eighth interspace, was then enlarged by lateral cuts of the intercostal tissues, and, by an aneurism needle, two stout ligatures passed into the cavity at either side of the wound were brought out in the ninth space, near the cut ends of the rib. These, when tied, involved the pleura-subcostal periosteum and intercostal vessels. The part between the ligatures was then cut through, well into the ninth space, and this opening, gained without hemorrhage, readily admitted the little finger. The tube was felt lying on the posterior wall of the cavity, parallel to the spine, a finger's length from the opening. It was quickly fished out by a stout bent probe and forceps, and found to measure *seven inches in length*.

A quantity of fetid pus and decomposing clot was evacuated, and the secretions allowed to discharge into loose oakum. The accidental introduction of a drainage-tube into a cavity, which it is designed to empty, ought not to happen, if its end external to the wound be transfixed by a "safety-pin" or needle, which will lie flat on the skin, and should not cross the lumen of the tube.

PROLONGED INSTRUMENTAL COMPRESSION OF THE PRIMITIVE CAROTID ARTERY AS A THERAPEUTIC AGENT.

By J. LEONARD CORNING, M.D.,

NEW YORK.

I was led some time since, by considerations of an anatomical and physiological character, to investigate the significance of certain phenomena which point to a disordered condition of the cerebral circulation. My first experiments were on epileptics. Having noted the accession of blood to the head, and violent throbbing of the carotids, observable in these patients during the attack, I determined to ascertain by actual experiment whether there is any cosequence between the sanguineous redundancy and the epileptic seizure. To this end I constructed a species of "truss," with which it is possible to compress both common carotid arteries for any length of time. With this and similar instruments I compressed continuously (night and day) the carotid arteries of a number of epileptics, who exhibited all the usual symptoms of the disease (periodicity of attack, frothing at the mouth, biting of tongue, etc.). Although, at the time I began my experiments, some of these patients were having as many as three attacks every twenty-four hours, I was enabled to arrest the convulsions entirely during the space of several weeks—in fact as long as compression was continued. There was also marked improvement in general health, and a diminution in the frequency of the attacks for a considerable length of time after cessation of the treatment. I have also employed prolonged instrumental compression of the carotids during congestive headache, with the result of affording immediate and continued relief. The procedure did not prove efficacious in the convulsions of general paralysis. I have tried continuous compression as a somnolent agent in acute maniacal excitement, with good results. On this and kindred subjects I shall have more to say hereafter. Temporary, *digital* compression of the carotids, as revived by Parry in 1792, possesses, I believe, undoubted efficacy as a means for arresting various forms of convulsive attacks. The value of the procedure as a means for aborting epileptic attacks, I have myself had abundant opportunity of proving. Indeed, so impressed have I been of the great utility of temporary compression in convulsive attacks, that I have constructed a special instrument, which enables the attending physician to execute the necessary manipulations, even during the most violent contractions of the cervical muscles. With the implement in question I have frequently arrested, in from three to eight minutes, attacks whose ordinary persistency was from thirty to forty-five minutes. This instrument possesses value for the reason that it is frequently quite impossible to overcome, by simple digital compression alone, the excessive spasm existing in the cervical muscles during the attack. The chief features of this instrument are two curved metallic armatures, to each of whose extremities is attached an adjustable pad. The object of this latter device is to permit of so arranging the pads, that the artery is compressed *away* from the jugular vein and in the direction of the spinal column. A handle, to which are attached the other extremities of the armatures, allows the operator to exert his strength to the best possible advantage, during the act of compressing.

Author's Carotid Truss (for prolonged compression).

When the convulsions are unilateral, the compression of the carotid on the opposite side may be essayed; but should there be no alleviation, both carotids should be compressed. It is not advisable to compress both carotids to the same degree as either of those arteries singly.

That portion of the continuity of the common carotid artery which I have found best suited to the application of instrumental compression is situated opposite a point which is located slightly above the juncture of the thyroid with the cricoid cartilage. The operator must use all diligence to avoid compressing the internal jugular, and although much can be obtained by instruments, the final success attending their use will depend greatly on the dexterity of the practitioner himself.

Trousseau, Malapert, and others have at one time or another claimed the honor of having discovered the therapeutic value of *digital* compression

of the carotids—not being cognizant of the publications of Parry. If we accept, however, the rather vague accounts of the ancients, I think we must ascribe the honor of the very timely *re*-discovery, at least, to Parry.

The instrument, shown on page 173, is designed for *prolonged* compression, and consists, in the first instance, of a steel spring, which, encircling the neck, supports two movable armatures. To each of these latter is affixed, by means of a ball and socket joint, a narrow pad, which being adjusted to the artery is held in place by the elasticity of the spring. The tendency of this elastic force is to press the artery away from the jugular vein and in the direction of the spinal column. An absolutely accurate adjustment of the instrument is a *sine qua non*. Careful digital exploration should always precede the application of all instruments designed to compress these arteries.

CURABILITY OF INEBRIETY.

By T. D. CROTHERS, M.D.,

HARTFORD, CONN.

For years the fact that inebriety is curable has been demonstrated in all stages and conditions of life. Take a common incident of an inebriate of many years' standing, who suddenly stops the use of all spirits, under circumstances the most adverse, and continues ever after a temperate life. In answer to all inquiries he will say that he made up his mind to stop, and although it was a severe struggle to do so, he was determined and hence succeeded.

In another case, where the man has resisted all the influences that could be brought to bear on him for many years, then yields at last to some insignificant entreaty, signs the pledge, and although in the same surroundings, remains temperate the rest of his life.

A third case who is in chronic stages, and has signed the pledge repeatedly, asserting that he would stop the use of spirits, failing as often, will all at once recover and remains steadfast. A fourth case will change all his habits of living from the influence of conversion, and even when suffering from the extreme entailments of alcohol, will exhibit astonishing physical changes, and revolution of living. Often inebriates in a semi-intoxicated condition, unable to do business, or reason clearly on any ordinary matter, will come under the influence of powerful religious emotion and from that time recover permanently.

They are frequently carried away in the current of a temperance revival, and entirely reform. Many instances have been noted of chronic inebriates who under the influence of profound mental emotion have seemed to recover perfect control of themselves and ever after abstained. The following are some illustrative cases which are more or less common: The death of a near relative, or the alarm from the fear of death, either from severe illness or a stroke of lightning, a railroad accident or falling into a stream of water; intense disgust at anything; sudden loss of property; protracted vomiting; debility from any cause, or a knowledge of dangerous actions committed during intoxication. These, and many other conditions that are merely operations of the mind upon the body, are in some instances more effectual and positive in their effects than medical means. Temperance literature is full of the history of such cases. The stock and store of all gospel and temperance lectures are crowded with them. From all sides these cases are held up as examples for every one to follow.

The failure of ninety-five out of every one hundred to be permanently benefited by these means is attributed to the insincerity of the patient, when in reality these cases are cured by means that are psychological and almost entirely unknown, and are mere exceptional cases, which indicate the possibilities of cure from a thorough knowledge of all the conditions which enter into this problem. The recovery of the man who pledges himself not to drink, and the change of life from the power of conversion, are accepted as unmistakable evidences of vice, and the capacity of the patient to recover at will. Add to this the mystery and superstition of the past ages, out of which have grown all the efforts to reach this evil by moral means alone, based on the most profound ignorance of both the condition and character of inebriety.

The methods to cure inebriates in the past have varied with the theories of its causation. Among the ancients, both the physical and spiritual nature of inebriety were abdicated, and methods of treatment, including punishment and appeals to spiritual forces, were used, and the frequent reference shows that some of these cases recovered. When inebriety became notorious in the older civilizations of Egypt, Greece, and Rome, many means were adopted to check it. One method which has come down to modern times, and clings to the superstitions of the subject, is the plan of forcing the inebriate to use food and drink saturated in spirits for a long time, that he might become *disgusted* and thus be cured.

In Solon's time, inebriety was punished by death. In the fourth century, it was thought to be an evidence of a thorough possession of the devil, from which only the greatest spiritual exertions could liberate. The writings of the fathers show that many were rescued from this evil, and remained examples of the grace of God. In modern times, many of these views and theories have appeared again. One man asserts that inebriety is a disease of the stomach, coming entirely from adulterated spirits; as evidence, he cites cases of men who use pure spirits and are free from inebriety a lifetime, or are able to use spirits in moderation. A class of men have urged that inebriety was purely a failure of the will-power, and that its cure could only be accomplished by training the will to touch, taste, and handle spirits, but not use it.

An institution was established on this faith, and patients were treated by the gradual reduction plan. Spirits at all times were in their reach and carried about with them, with nothing but their reason to prevent them from using them. It has been claimed by reputable authorities that permanent cures have followed this method—the truth of which cannot be doubted when we have authenticated instances of bar-keepers who become temperate and continue in the business.

Instances are reported, in Sweden, where the method of disgusting the patient by putting spirits in everything that was drank or eaten, proved successful. This plan, tried in London, caused the death of two persons by delirium, and ended disastrously to the others. The numerous specifics which have been put on the market by unscrupulous quacks, have been followed with some success. Take the Cinchona Cure: undoubted instances of

recovery have followed its use. The following is a fair illustration of the power of these remedies: A lady whose husband was a lawyer of much talent, but a constant inebriate, persuaded him to use this much-vaunted cure. He did so, and claimed great benefit from its use. One day his wife could not procure it from the druggist, but a substitute being suggested (a watery infusion of bark), which she gave, with the same results. Later, she gave him simply colored bitter water, and he recovered, giving this drug the credit of his cure. Of a similar character to this is the Carracus Frog Cure, a powdered infusion of horned frog, of a peculiar character; taken in specific manner, is called a certain remedy. Instances are reported of cures from this means. Mineral waters and water-cure establishments can always refer to many cases who claim to be cured by these means. Places where the diet is a special study and where certain specified articles are used only, to the exclusion of all others, claim the same results. Faith-cures, where the constant application of the religious emotion is applied, refer to many cases restored. The advocates of strict restraint, as in insane asylums, and the friends of opposite views, who trust entirely to the honor of the patient, have illustrated cases to confirm their views. Even the Turkish-bath men will point to those who have reformed and been cured under their treatment. A method once used commonly was to send the patient to sea, where he could be under the exact discipline of ship-life, and his habits fully controlled. Cases of inebriety have been thus cured. And so might the catalogue of different means and methods, which have been used to cure inebriety, be extended to a great length, and, in a certain number of cases, positive cures can be found which are ascribed to all these methods. The English prison committees have reported a number of permanent cures from the worst and most chronic stages of inebriety, following long terms of imprisonment for some petty crime associated with inebriety. In one case, a man fifty years of age, was sentenced ten years for poaching. From twelve years of age he had been an incorrigible drunkard. From the time of his release, or the expiration of his sentence, until his death, at seventy, he led an exemplary life. Upon this was based a long essay on the necessity of having inebriates in prison for long terms of service as the most curative measure. Similar instances have been reported in this country. One having a wide circulation was the imprisonment for one year of the son of a noted clergyman, the cause being inebriety, and the father the complainant. At the close of his term, the young man entered the world again, and became a reformed and changed person. The friends gave a wide publicity to this case as showing what jails could accomplish for inebriates.

There are no reliable statistics of the results of any of the numerous means now urged for the cure of inebriates by the power of faith, prayer, or the pledge. The temperance movements having attracted much attention, are estimated variously as to actual results. The advocates claim sixty and seventy per cent. of permanent recoveries. Others place the figures from three to six per cent. But no confirmatory proofs have been produced to sustain either statement, which are based almost entirely on observation. A gospel temperance movement in a New England town, under the care of Mr. Moody, enlisted or converted one hundred and twenty inebriates, who were not only pledged but claimed to be new men, living a new life, fully mastering all their appetites and impulses. Three years after, ninety-eight had relapsed and were drinking as before. At the end of five years only five were known to be temperate or reformed men.

In a prominent county in New York a temperance organization visited every district, holding lectures and urging all to sign the pledge. One year over three thousand had signed the pledge and claimed to reform. Six years thereafter a politician, going over the same ground, made diligent inquiries of the persons who were pledged, and found only fifty-eight who had continued temperate. These are merely hints of the possible results of these efforts which must be settled by future studies. The asylum treatment of inebriates has furnished more positive data of the curability of inebriety than from any other source. Dr. Joseph Parrish, now of Burlington, N. J., was one of the pioneers in the physical treatment of this class, and for many years had charge of two asylums. Having retired, he has made careful studies of a large number of cases which were under his charge, reaching the conclusion that from thirty-eight to forty per cent. of these cases have been permanently restored.

Dr. Albert Day, of Boston, Mass., who, for eighteen years, has been in charge of inebriate asylums, and is now at the head of the Washingtonian Home, concludes, from a study of over two thousand cases, that over forty per cent. are permanently cured who remain under treatment from six to twelve months. In one hundred cases who had been under his care for one year, forty-eight were yet temperate six years after. The late Rev. John Willett, who was superintendent of the Inebriates' Home at Fort Hamilton for fifteen years, was confident, from his studies and private statistics, that over thirty-five per cent. of all cases who were treated at his institution were permanently restored.

At the New York Inebriate Asylum, over fourteen hundred circular letters were addressed to friends of patients who had been under treatment at the institution five years previous. The answers received showed that sixty-one and a fraction per cent. of that number were restored. With this result at the end of five years, the inference is clear that a certain number would remain permanently restored.

These are some of the conclusions of pioneers who have given the subject close study, and whose opportunities have been superior to others. Many of the most eminent men in the profession in this country have been very emphatic in declaring that inebriates could be cured, in properly managed asylums, and the curability would be found fully equal to that of any other disease. In England, many of the leading psychologists and students of nervous and mental diseases have pronounced the same views. The mere mention of the names will suffice to show how the subject is regarded. Among them are the late Drs. Forbes Winslow, Francis E. Anstie, Crichton Browne, Arthur Mitchell, David Skae, Alexander Peddie, John Nugent, Thomas B. Christie, Henry Dixon, Robert Druitt, Thomas P. Nelson, Sir Thomas Watson, Sir William Gull, Henry Maudsley, and others.

The following resolutions, embodying views of some of the most distinguished physicians in the world, show that the treatment of inebriety through physical means gives more promise of permanency than all others. The British Medical Association, representing nearly seven thousand of the medical profession in the United Kingdom, at their meeting

in August, 1877, assert that "excessive intemperance is, in many cases, a symptom of a special form of insanity, which requires special treatment with a view, first, to the recovery of those affected, and, second, to the protection and advantage of them and society."

The American Medical Association, a body of physicians representing every State and different sections of all States of the Union, at their June meeting, 1876, resolved, "That special treatment in institutions adapted to the purpose is required for the cure of the inebriate, and it is the imperative duty of each commonwealth to establish and maintain public institutions for the treatment and cure of inebriates."

The Association of Medical Superintendents of American Institutions for the Insane, May, 1875, resolved, "That it is the duty of each State to establish and maintain a State or public institution for the custody and treatment of inebriates, on substantially the same footing, in respect to organization and support, as that upon which the insane are organized and supported, and that they shall not be admitted for treatment into asylums for insane."

The American Association for the Cure of Inebriates, at its annual meeting in 1871, resolved, "That it is the duty of the legislature, as a measure of State economy, to provide means for the erection and encouragement of hospitals for the detention and treatment of confirmed inebriates."

The ten inebriate asylums of Great Britain, four in Germany, and two in Australia, all unite in presenting the most positive proof of the curability of this disorder. The asylum treatment of inebriety is surrounded with difficulties of the most formidable character. Among them may be mentioned want of legal power to continue the treatment a sufficient length of time. In one State only in the Union can patients be retained legally for a year or more, and that is Connecticut. The only country in the world with similar laws is South Australia.

The class of persons who come to these asylums are the most helpless generally, and those who have exhausted every other resource and become incurables. As a last resort they try an inebriate asylum, expecting results from a few weeks' treatment that would be almost miraculous. Frequently these cases are not in earnest in aiding the physician in his efforts for recovery. But they expect results without any exertion on their part, and failing in this, become bitterly opposed, relapsing and reporting the most extravagant stories of the weakness and failures of such institutions, while other cases who are in earnest unite cheerfully with the physician, remaining a sufficient time to recover, and go out into active life, concealing the past. In one case the asylum and its treatment suffers from the abuse of the incurables, which is not neutralized by the examples or defence of those recovered. Hence the real value of asylum treatment cannot be estimated from such statements and the current of public opinion. Notwithstanding the incurable character of a large majority of all the patients who come for treatment in these asylums—the want of legal control over the patients to restrain them long enough for permanent recovery, with the imperfect buildings, surroundings, and want of both means and appliances to reach the varied needs of this class—the general incapacity of managers, want of public sympathy and support—the actual results are really remarkable.

If thirty or more per cent. of the worst cases can be cured under all the difficulties which at present surround this method of treatment, what may we not expect from the treatment of recent cases in well-organized, well-appointed asylums, with legal control, managed by scientific experts and capable men?

The conclusion is beyond all doubt that while inebriety may be cured by other means, yet more positive results will come from the treatment through physical means in asylums and hospitals. The general fact which is supported by all the evidence that can be obtained up to this time is, that moral means in the treatment alone which includes the efforts of churches, societies, faith and prayer cures, may have from two to five per cent. of cures. That physical treatment in asylums consisting of positive removal from temptation and building up both body and mind results in the cure of from twenty to forty per cent. These conclusions may vary when the subject is more thoroughly understood, but under all circumstances they will be found substantially correct. The cures ascribed to moral means in many cases come from the operations of physical causes, such as the influence of the mind over the body, and the shock from powerful mental emotions, and many psychological conditions at present unknown. The cures from physical forces, such as restraint in asylums, and building up the nervous system, are simply the application of natural means along the line of laws, by the removal of all sources or causes of danger and the building up of the body to resist these influences in the future. In both cases permanent cures will follow. In the former, they must of necessity be less; in the latter, every measure and appliance is used, and the results must exceed all other methods.

This may be illustrated in the case of ten men who are suffering from fractured legs. The application of the splint and bandage, and physical means to keep the parts in conjunction, will with much certainty be followed by permanent cures in all cases, if they remain under treatment a sufficient length of time. If to these cases nothing but the most effective moral means were applied, such as the power of prayer and the pledge to remain still, or to recover, a certain number would undoubtedly without other means be restored.

Inebriety is a physical and psychical disease, which demands physical and psychical means in the treatment. By the word psychical is meant the means which influence the mind, rousing it up to greater faith and endeavor. Inebriety is not always positively cured by the best means in the best asylums at present, because the means are very imperfect, and a knowledge of the subject is limited.

The Inebriate Asylums or Homes of to day are not the transient schemes of enthusiasts, but places where the applications of exact means to reach a great physical necessity can be made. Five hundred years before the Christian era the idea of physical treatment for inebriety and its curability was conceived. To-day, the places where such means are practically used are struggling against misrepresentation and ignorance of the true character of the work. The failure of one or all these institutions does not change the truth of the principles upon which they are founded. For years the treatment of insane as diseased persons was bitterly denounced. The stage of opposition and indifference which all advances of science must encounter, at the present time invests the asylums for the physical treatment of inebriates. Notwithstanding all the obstacles,

they are proving each day more clearly the curability of inebriety from the application of means that will meet all the demands of the case. The plan of treatment in these asylums is no mystery, and may be summarized in the following: Removal from the exciting cause—alcohol—and full control of all surroundings and habits of life; rest; building up the organism and nervous forces, through the use of every means known to science and found by experience of great value; effectually quarantining the patient from every source of danger, and increasing both physical and mental vigor to resist the diseased impulses in the future. This is the basis of all treatment, and the more effectually it is carried out, the more certain are the results. Some of the conclusions which are apparent from the above statements may be grouped as follows:

First.—Inebriety is most emphatically curable by means as varied and complex as the causes. The wider and more practical these means, the greater the results.

Second.—The teaching of all experience and science point to the value of physical means in a hospital especially adapted to this purpose, where may be gathered all the remedies that can act on body and mind.

Third.—The subject of inebriety and its cure is a medical one, and cannot be solved from a moral stand-point by clergymen and reformers, but must be studied by physicians: then its curability can be determined beyond the field of speculation.

Chian Turpentine in Cancer.—Dr. John Clay, in a recent article in the *Lancet*, affirms that after a further experience of two years he has nothing to take back as regards his first announcement of the value of Chian turpentine in cancer.

He makes the following statements: Nine cases of cancer of the uterus have been under his treatment for a year. They are now convalescent. The growths have disappeared, there is no bleeding or pain on touch, and the parts appear to be covered with mucous membrane. In a number of other cases there is freedom from pain, diminution of hemorrhage, and sloughing of the growth, with improvement in the general health. A number of advanced cases have been treated and the patients died, but with some temporary improvement at first.

Dr. Clay thinks that Chian turpentine, on the whole, acts quite uniformly in cancer of the uterus; that it removes the infiltration about the growth and prevents its progress. The earlier the case comes under treatment, the better the chances.

A number of drug-houses still advertise and warrant as pure Chian turpentine substances which are not genuine at all. Southall & Barclay, of Birmingham, prepare the drug in a very acceptable manner. They prepare an essence, one teaspoonful of which contains three grains of the drug.

The vagina and rectum should be sponged daily with equal parts of vinegar and water. Astringent insufflations should be used. The propriety of excised cancerous neck is doubtful. For pain, opium, or drachm doses of tincture of Jamaica dogwood may be used. For diarrhœa or dysentery, the oil of eucalyptus, in five minim doses, is efficient.

In cancer of the vulva, Chian turpentine acts slowly. In cancer of the breast, the drug seems to be of much service, but need hardly supersede the knife.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

Service of WM. GOODELL, M.D.,

PROFESSOR OF CLINICAL GYNECOLOGY.

(Reported by Guy Hinsdale, M.D.)

CYSTITIS—DILATATION OF THE URETHRA.

This patient, gentlemen, is thirty-one years of age, and has borne two children. Both labors were difficult, and delivery was accomplished by the use of instruments. Ever since her first labor she has had an irritable bladder, and her second labor made matters worse. The patient complains of frequent micturition, with burning pain; there is urinary tenesmus, and she passes bloody urine. For six months she has had a purulent leucorrhœa; she has a lacerated cervix, and complains of pain whenever the bladder is touched. She is still suckling the child. The urine has been examined, and contains albumen and pus. The albumen, however, betokens nothing grave, for it is not large in quantity, and is dependent on the presence of pus and blood.

This woman has passed through an energetic course of treatment, both local and constitutional, adapted to modify the condition of the urine, but she has found no relief. She says that she has to get up very often to pass water—every half-hour, according to her statement, but that I can hardly believe; were it every hour at night, that would be a great tax upon her strength. You know how difficult it is for a man to walk a thousand miles in as many hours; the broken rest, far more than the continued effort, is very exhausting to the whole system. In this woman's case, the strain of nursing, added to the loss of rest, is altogether too much for her.

Why did labor cause this cystitis? It is possible that, during delivery, the traction of the forceps was not made in the axis of the superior strait, or in that of the pelvic curve; but we cannot say that the instruments were improperly used. The slow passage of a large head bruised the neck of the bladder and the urethra; as a consequence, the parts became swollen, stenosis of the urethra occurred, and she had a stoppage of the urine. Not only this, but the walls of the bladder were paralyzed by pressure; the walls of the abdomen were weakened and tired out by bearing-down pains, and so the abdominal muscles, which you know are the best and most effectual to expel the urine—being, in point of fact, the true detrusor muscles—from sheer fatigue allowed her water to accumulate.

Often and often, after hard labors, women are not able to empty their bladders, and it is necessary to catheterize them. Young men, however, dislike to pass the catheter, and, like the ostrich sticking his head in the sand, they shut their eyes to the danger, and say "We'll wait a while;" perhaps they leave it twenty-four or thirty-six hours, and often an incurable cystitis follows timidity and delay of this kind. Never have any hesitation about using a catheter; you can pass it along your finger, as I have described to you before, or, if you fail, boldly call for a light. A woman who has been pregnant once, and has had the walls of the bladder over-

stretched after a tedious labor, by neglect of this precaution, is never the same woman again. When a patient of yours complains after labor that she wants to pass water and cannot do it, do not delay relief. If you practice in the country, and are perhaps four or five miles away from your patient, and apprehend any difficulty of this kind, you can insert a Skene-Goodman self-retaining catheter. By attaching to it a piece of tightly fitting gum-tubing, and controlling the escape of urine by means of a clip, you can have her water drawn at stated intervals, without making a special journey for that purpose. A suppository containing one grain of the aqueous extract of opium and one-third of a grain of the extract of belladonna, and a broad poultice, placed over the bladder, you will find to afford your patient great comfort in acute cases of catarrh.

I shall now gently examine this woman's womb. As I touch the cervix, I find a tear on the right side, extending down to the junction of the vagina. There is also a laceration on the left side, but it is not so bad as the one on the right. There are evidences here of a previous inflammation; plastic matter has been thrown out, and the vagina seems to have lost its elasticity. I wish to see now if the uterus is pressing in any way on the bladder. I find it, however, in good position; neither the fundus nor the cervix is pressing upon that organ.

As I find no extrinsic cause for this irritable bladder, I am going to dilate the urethra. But I wish to do it with clean hands; I do not care to carry any vaginal discharges or other poison-germs into the bladder. So I shall use soap and a nail-brush.

The first thing to be done, after the patient is completely etherized, is to pass in a uterine dilator —Ellinger's is a good one for this purpose—and gently stretch open the urethra, as I am doing. This mode of treating cystitis is a very successful one. It is, to be sure, not infallible, but succeeds in a large majority of cases. A case in which this operation failed—in fact, the worse case of cystitis I ever saw, was due to a single over-distention. The subject, a lady, had travelled a whole day in a stage-coach, and from motives of delicacy did not empty her bladder. By and by, on reaching her journey's end, she found that she could not pass her water, and had to call in a physician to draw it off. On that day troubles began which have lasted many years.

I think the most grateful man in the world is the man who has just been relieved by the catheter of over-distention of the bladder. So, on one occasion, a poor widow who had been relieved by me of an irritable bladder, insisted on giving me more than the amount of my bill.

I now withdraw the dilator and introduce my little finger, which is well-oiled. By a slight rotary motion I slowly pass it in.

I have often slightly torn the anterior margin of the meatus, and, in one instance, quite a large amount of blood escaped. The patient came into my hands while she was pregnant. There was a slight rent of the meatus. I endeavored to stop the bleeding by a piece of absorbent cotton moistened with Monsel's solution, but no astringent that I applied seemed to be of any service, so I passed in a needle deep down to the bone, and closed up the wound by a stitch. In pregnancy all the veins in this portion of the body are enlarged and engorged, so that the slightest rent may occasion troublesome bleeding.

There is some blood here; the urine is slightly tinged with blood. What has caused it? There has been a slight lateral tear. In my book I say that you can dilate to the size of your forefinger. Perhaps I should modify that statement. I have had, in one case, a loss of control of urine, but that is unusual. Now, my forefinger is of medium size. It is not large, nor yet is it particularly small. I think that if your index finger is of large size you had better not use it as a dilator, but limit yourself to your little finger. I once operated upon a lady whose physician, in dilating the urethra, had used his thumb, by means of which the part was over-stretched, and loss of control of the bladder followed.

I think that I have dilated the urethra sufficiently to introduce my forefinger. It goes in very easily, and will sufficiently stretch it. I am now able to feel the inner surface of the bladder, which is very much roughened by contraction. This bladder is a pus-secreting surface, and it is denuded of its epithelium at points. I can feel granulations. You should always take this opportunity to explore the bladder for stone, or other foreign bodies. The finger is an instrument with brains in it, and consequently worth far more than any artificial sound.

This operation of rapid dilatation for the relief of cystitis was introduced by Mr. Teale, a surgeon in Birmingham, England. What is the *rationale* of it? This method of treatment is certainly somewhat empirical, but not altogether incapable of explanation. When, from any cause, there is irritation of the bladder, the muscles tend to contract spasmodically. There is no true sphincter here, but from the neck of the bladder to the meatus urinarius, the muscular fibres that surround the urethral track are in a state of tonic and rigid contraction. As a result they become hypertrophied, just as in some people the habit of constantly winking produces, after a while, enlargement of the palpebral muscles of the eye. The treatment of cystitis by dilatation presupposes the presence of a fissure in the neck of the bladder, the presence of which is almost always purely a matter of conjecture. We can rarely tell beforehand whether or not such a lesion exists. The muscular fibres surrounding the urethra are overstretched and temporarily stunned by the dilatation, permitting the escape of urine with as little pain and as little spasm as possible. When a permanent cure follows dilatation, I think we may fairly attribute the result to the healing, by this operation, of some pre-existing fissure—just as fissures of the anus are cured by overstretching the sphincters. However probable all this may be, I have never yet been able to feel what I could swear to as a fissure in the neck of the bladder. The marked improvement following a forced dilatation, made for the relief of cervical endometritis and dysmenorrhœa, has sometimes led me to follow out the analogy, and to think that, in certain of these cases, a fissure at the internal os might be the cause of the trouble. Let me take this opportunity to say, in connection with this subject, that fissure of the anus is of frequent occurrence in women. Whenever you have an examination of this kind to make, and especially, as in this case, when the patient is under ether, don't fail to explore the rectum. Where one man will have a fissure *in ano*, ten women will. Two causes bring about this condition: first, habital constipation; second, the injuries sustained during labor. The dilated mucous membrane gets torn, and from the constant irritation to which it is subjected, the raw surface fails to heal.

My forefinger has entered this urethra without any trouble. I often have had to force my way in,

my finger being pinched and benumbed in the operation. I think I never had to deal with a urethra into which I introduced my finger with such ease.

You might suppose, from the apparent violence to which the urethra has been subjected, that the first time the patient passes her water she will have great pain. On the contrary, it will be quite the reverse; the muscular fibres have been temporarily paralyzed, sensation has been stunned by the operation.

This woman has had medicated injections into the bladder through a double canula. This plan of treatment is very good, but I am not cognizant of having had a cure from it.

In all these cases it is well to make use of an opium and belladonna suppository; in fact, in all these operations, especially in the unmarried, pulling on the parts with the speculum causes some soreness, which the suppository relieves. It is a very good thing in these cases to have your opium in one suppository and the belladonna in another. In that way you can increase or diminish the quantity of one drug without affecting the administration of the other. But the precaution *par excellence* is not to allow the bladder to fill too much. We must introduce a catheter, and leave it there. And now a point about its introduction. In passing the instrument, never push it in to its full extent; it will be sufficient if its eye is just beyond the entrance of the urethra. The bladder resents every foreign body—if the catheter is pushed in too far, it hits those frightfully sensitive walls, and, of course, the patient feels it instantly. Sometimes it is a very good plan to get those catheters which have their opening at the tip; such a one would not need to project into the cavity of the bladder at all.

Of remedies by the mouth, atropia is by far the best; and, by the way, let me here say that belladonna is a good stand-by in almost every form of vesical irritation. I usually give it according to the following prescription:

℞. Atropiæ sulph. ..... gr. j.
Alcohol ..... ʒ ss
Aquæ ..... ad fl. ʒ iv.

M. S.—Four drops before each meal, in a wineglassful of water. To be increased or diminished according to the constitutional effect.

Bicarbonate of soda and sweet spirit of nitre may also be used with advantage. Injections into the bladder, in my own experience, have not been very satisfactory. Braxton Hicks uses a two-drop solution of hydrochloric acid, injecting it daily, an ounce at a time, and repeating it until the urine flows off clear. He then follows it with a solution of morphia of one to two grains to the fluid ounce, which obtunds the pain. Others employ a two-grain solution of quinia and a five-grain one of chlorate of potash. A solution of carbolic acid—two, three, or four drops to the fluid ounce—is also recommended. In obstinate cases of chronic cystitis, I have used, with benefit, solutions of nitrate of silver. Beginning with a two-grain solution, slowly increase the strength by two grains every other day, until you reach twenty grains to the fluid ounce. Allow this to remain in but a short time (while you count ten seconds) and then let it come out with a double canula; if the pain be great you should use a hypodermic of morphia.

I do not, however, consider that such treatment is warranted until you have introduced your finger into the urethra, and attempted a cure by dilatation.

Progress of Medical Science.

Comparative Qualities of the Blood in Chlorosis and Pregnancy.—Researches are now being very actively conducted with the view of determining the comparative richness of the blood in its solid and liquid constituents in various diseases and conditions, so that we soon shall have valuable data at hand for clinical purposes. One of the most recent investigations is that of Dr. F. Willcocks, who aimed at determining how far there is an analogy between the well-defined blood-change of chlorosis and less well-known state in healthy pregnancy, and to determine how the diminution of the coloring-matter in either case is produced. The subjects for the experiments were out-patients, twenty-nine in number, connected with the maternity department of King's College Hospital. The chromometer and hæmometer of Hayem (Gower's modification) were used. The following conclusions were enumerated: 1. A more or less considerable diminution of hæmoglobin is found in both pregnancy and chlorosis, especially in the latter, but beyond this fact no obvious analogy exists between them. 2. In pregnancy, the diminution in color is due to a fall in the number of red cells, while the individual cell remains of high value. In chlorosis, both the cells and the individual value are reduced, the latter being in excess of the former. 3. The blood-state of healthy pregnancy is due to a large relative increase in the water of the plasma, and this condition does not constitute a true anæmia, but is due to the progressive enlargement of the vascular area during pregnancy.—*Lancet*, December 3, 1881.

Hydrophobia: Its Successful Treatment, and Various Views as to Prophylaxis and Treatment.—Mr. Ruxton, a surgeon in the East Indies, reports a very remarkable case, which seems worthy of being classed with the small number of cures that are now on record. A boy, between five and six years of age, was bitten in 1874 by a bull-bitch, that was subsequently killed. The bites were deep and severe, but were freely cauterized with fuming nitric acid, causing considerable loss of tissue. Carbolized oil was subsequently employed as a dressing. A month later he became unconscious, refused to drink, and was exceedingly nervous. Mr. R. finding him with saliva issuing from the mouth, suspected the worst, but ordered, as a temporary measure, the tepid sheet and a diaphoretic mixture. Tranquil sleep and diaphoresis followed, but about one in the morning the patient awoke screaming, had frequent convulsions, refused liquids, and foamed at the mouth. Thinking that, as a palliative, cannabis indica might be usefully employed, five minims of the tincture were given, and a short sleep followed. This dose was repeated after an interval marked by screaming fits and saliva-spit from between the teeth. Deep sleep, lasting ten hours, now ensued. On awaking he recognized his mother—the first time for twenty-seven hours. His pupils were now intensely contracted. A third dose of five minims was given on the evening of the second day of medical attendance, and sleep ensued for eighteen hours. Pulse and respiration remained good all the time. From this point the progress toward recovery was steady and continuous.

Dr. Ewart, formerly deputy surgeon-general in the Bengal army, in the same number of the *British*

Medical Journal (November 19, 1881), states that little confidence can be placed in drugs after the symptoms have developed. He advocates cauterization as a prophylactic and as practised successfully by Youatt in four hundred cases; and he quotes Sir William Gull, who states: "If I had to choose for myself, I would inhale ether and have the whole track of the wound destroyed by strong nitric acid or nitrate of silver." But Ewart places himself on the side of Sir Joseph Fahrer, who says: "If I were bitten by a dog or other animal, *even suspected* of rabies, I would suck the wound, put in a ligature, inhale ether . . . . and have the bitten part thoroughly cut out, and then cauterized with nitric acid or nitrate of silver, so as completely to disorganize any virus there might remain. Excision, he remarks, may be practised successfully after the wounds are thoroughly cicatrized."

Spinal Arthropathy, or Charcot's Joint Disease.—At the meeting of the Clinical Society of London, held October 14, 1881, Mr. C. B. Keetley exhibited a patient having the curious disease which was first described by Charcot. He was a shopkeeper, aged thirty-four, had been married ten years, and had three healthy children. Previous to October, 1880, he had experienced the following symptoms: slight weakness in the legs, attributed to "corns," and of twelve years' duration; pains in the muscles, described as rheumatic; attacks of diarrhœa, occurring fortnightly. In October of 1880 the "corn" ulcerated, and the great toe became greatly swollen. A week afterward, the hip, groin, and thigh became enormously swollen, but were painless. A fluctuating tumor then developed in the lower part of the front of the thigh, and finally discharged, liberating a synovia-like fluid. After two months the patient was able to move again, but the limb was shortened one and one-half inch; it was everted, and gave a peculiar crepitus. Apparently the head of the femur had disappeared. Afterward the left hip was affected in its turn, and seemed to undergo anatomical changes similar to the right. Now there were some symptoms of tabes dorsalis. There were loss of patella-reflex, of iris-reflex, of the power of standing with the heels together and the eyes shut, partial loss of sensation on the outer sides of both feet, perverted sensation in the right foot, slight deafness in the left ear. There were also "intestinal crises," as indicated by the periodical attacks of diarrhœa. The treatment had been iodide of potassium and salicylate of soda, of each five grains, three times a day. Stress was laid upon the fact that this rare disease may and doubtless has been often overlooked, especially as the ocular and other symptoms might long antedate the tabetic.

A Substitute for Carbolic Spray.—In the *British Medical Journal* (October 15, 1881) is published a paper by Mr. H. W. Mayo Robson, F.R.C.S. Eng., on the subject of substitutes for the carbolic spray. The value of the Listerian method of dressing wounds is recognized by all surgeons, but its disadvantages and dangers are also apparent to many. By its use the operator has his vision obstructed, and his sense of touch impaired. He is obliged to spend much of his time in an unpleasant atmosphere. To the patient the risk of carbolic acid poisoning is constant, especially in abdominal surgery. The spray, as is known, has been abandoned by Dr. Keith in ovariotomy. Mr. Robson himself remarks that he has known death to be caused in the use of the spray by chilling of the viscera.

Mr. Robson has experimented with such volatile substances as the oil of eucalyptus, cajuput, and peppermint, and has demonstrated their antiseptic powers. Infusion of hay, having been boiled, was subsequently placed—capped with cotton-wool—in an incubator, at a temperature of 100 F. The infusion was taken from the incubator, uncapped, and different specimens were placed in vessels containing a small amount of oil of eucalyptus, or oil of cajuput.

After different periods of time the specimens were again capped with cotton, placed in an incubator, and then examined at leisure. The following results were obtained: 1. Hay infusion, sterilized August 18th, placed in the incubator for two days, exposed to eucalyptus air for two hours on the 22d, and then placed in the incubator for two days. Examined on September 7th, and found to be absolutely free from living organisms, but to contain what appeared to be dead micrococci in the slight sediment. 2. Sterilized August 18th, in incubator till the 20th, in eucalyptus air for thirteen hours, in incubator till the 23d. Examined on September 7th, under a one-eighth object-glass, and found free from living organisms.

Numerous flasks were examined with like results, showing that these volatile substances, properly placed and handled, may render the atmosphere of the operating-room aseptic, if not antiseptic.

A New Method of Removing the Coccyx in Cases of Coccyodynia.—A very neat and satisfactory method of removing the coccyx has been devised and recently practised by Professor James E. Garretson, of Philadelphia. The woman, according to Dr. Garretson's description, had sustained, thirteen years previously, a fall from a carriage, which caused a fracture, or, perhaps, dislocation of the coccyx. The displaced bone had never been adjusted, but projected forward at a right angle to the sacrum, and was somewhat movable. Great pain and general nervous disturbance had existed for years, so that the woman's health was greatly deteriorated. On December 1, 1881, the bone was removed by the use of a powerful surgical engine, which has probably never been used for the enucleation of any bone in this manner.

To appreciate the procedure, it is necessary to recall that the coccyx is enveloped by periosteum, and separated from the external world by skin, superficial fascia, some muscular tissue, and dense fibrous structures. It is separated from the rectum by pelvic fascia, fibrous tissue, and muscular fibres of the coccygeus and levator ani muscles.

The operation was done as follows: after etherization, the patient was placed in position and a median incision made through the skin and supra-coccygeal structures down to the periosteum, so that the bone, with its periosteum intact, was exposed from base to apex. This was accomplished by plunging a bistoury through the tissues, over the middle of the bone, and enlarging the incision upward and downward as much as necessary. The next step was to uncover the posterior surface by loosening the tissues laterally as far as the margins of the bone—this was done with a few strokes of the knife. The periosteum was then incised in the median line along the whole length of the bone and detached by means of a chisel-shaped knife, as is done in osteoplastic operations for cleft palate.

When the posterior aspect of the bone had been thus exposed, a powerful surgical engine was brought into requisition, carrying in the mandril a burr,

having a cut face of one-third or one-half inch in diameter. This was given ten thousand revolutions in a minute, which made the burr appear as if at rest. To the exposed coccyx the revolving burr was applied and carried from side to side, ascending gradually from the apex to the sacro-coccygeal articulation. In this manner the bone, in a few moments, was removed in fine, dust-like particles, and the anterior layer of periosteum, with its attached muscles and fascia, left uninjured. In other words, the offending bone, which had caused neuralgia of many years' duration, was taken from its periosteal envelope, as cleanly as a mailed letter is removed from its envelope through a single incision. The attachments of the bone, which are, of course, inserted only into the periosteum, were uninjured, and the unimportant wound closed by sutures. No hemorrhage of sufficient moment to demand ligatures occurred.

The patient subjected to this operation is doing well, and will probably be out in a week or less after the day of operation.

This method of enucleation is certainly more artistic than the ordinary operation, by which the bone is cut loose with the knife, or torn from its attachments by forceps after being partially freed. The increasing number of cases to which the surgical engine is being applied shows that its development from the original dental engine was a distinct advance in operative therapeutics.

Connection of Cardiac and Renal Disease.—The *Cincinnati Medical News* (November, 1881) publishes a paper on the above subject, by Dr. Robert T. Edes, read before the Boston Society for Medical Improvement, May 9, 1881.

Dr. Bright noticed that hypertrophy of the heart was especially constant with that form of kidney disease known as interstitial nephritis. His sequence of phenomena was "renal disease, poisoning of blood from imperfect depuration, increased resistance, hypertrophy of heart." But Dr. Edes calls attention to the fact that hypertrophy of the heart exists almost constantly with that form of kidney disease where depuration is not prevented. Moreover, Grutzner and Litten found injection of urea—one of the excrementitious products—did not cause hypertrophy, though it increased the blood-pressure. Again, chemical analysis of the blood does not always show superabundance of the blood-excrement, where the cirrhotic kidney and heart enlargement have coexisted for some time. Drs. Gull and Sutton have found a thickening of the arterioles throughout the body to accompany interstitial nephritis; but while others doubt this, Ewald demonstrates that the disease in the vessels of the kidney is of a different nature from that of other parts of the vascular system. Mahomed has clinically demonstrated a pulse of high tension to be characteristic of Bright's disease, and gives for the cause of this pulse those agents which have already been recognized as causes of Bright's disease, viz., scarlatina, lead, alcohol, gout, etc.

According to this view the sequence of phenomena is the reverse of Dr. Bright's. It is first blood-poisoning and obstruction, and afterward increased tension, hypertrophy of the heart, and arterial and renal disease.

Nature's Invisible Police.—A very interesting lecture on "The Intimate Nature of Zymotic Diseases," was delivered by Dr. John Dougall, at the Glasgow Royal Infirmary School of Medicine, October 26, 1881. Whatever zymotic poison really is, it differs from every other poisonous substance in that it renders the poisoned person poisonous. The affected body is an alembic in which a special virus is elaborating and multiplying enormously, by an apparent destructive distillation of the blood and secretions, so that the tissues may literally become soaked and the body enveloped in an atmosphere of infection. This poison is named from the Greek word $\zeta\upsilon\mu\eta$, or leaven, and a person under its influence is held to be in a condition of fermentation. Taking small-pox as an example, we see how closely the zymotics resemble fermentation. 1st. A saccharine solution is fermented by the addition of a minute quantity of yeast. The human blood equally yields to the small-pox virus. 2d. A rise in temperature is noticed in both cases. 3d. There is a great multiplication of yeast in the sweet solution, and of the small-pox lymph in the blood. 4th. The yeast frothing to the surface of the fluid, and the eruption forming vesicles. 5th. Both are infectious—a cell of the new yeast can cause fermentation—a speck of the new lymph can produce small-pox in a susceptible person. 6th. The sweet solution is no longer capable of fermentation, the small-pox patient is no longer susceptible to small-pox poison.

Germ-theorists, as is well known, hold that each zymotic disease has its special poison, and that this special minute organism entering the blood produces morbid changes, which result in the particular disease of which it is the *germ*. Moreover, they hold that the air is filled with germs, which alighting in a proper medium, cause putrefaction. On the other hand, the believers in the physico-chemical theory hold that all such organisms are the *result* of the morbid conditions of their habitat. Their grounds are: 1st. That these organisms are only found on the parts of animals or vegetables of lowered vitality, or in their dead tissues. 2d. That on strengthening the vitality in living, or arresting decay in dead parts, they disappear. 3d. That when present in infectious matter it loses its power to infect, as observed in small-pox and vaccine virus. On these grounds the functions of such organisms are held as beneficent, and Professor Owen calls them "Nature's Scavengers," for maintaining the salubrity of our atmosphere, and "Nature's Invisible Police" for arresting the fugitive organized particles, and turning them back into the ascending stream of animal life. —*Medical Press and Circular*, November 16, 1881.

Muriate of Pilocarpine in Whooping-Cough.—According to Albrecht, the muriate of pilocarpine, when given at a sufficiently early period, never fails to cut short the most serious stage of whooping-cough, namely, the period of suffocative attacks, although the duration of the disease as a whole is not materially shortened thereby. The formula recommended is pilocarpin. muriatic., .025 grm.; cognac f. champ., 5.0 grms.; syrup. cort. aurant., 25.0 grms.; aq. destill., 70.0 grms.; of which mixture a teaspoonful up to a tablespoonful should be administered after every paroxysm, the dose varying with the age of the patient. The remedy acts very promptly, as may be demonstrated by laryngoscopic examination, which discloses a more profuse watery secretion and abatement of the inflammatory appearances in the mucous membrane. The drug should be discontinued as soon as the paroxysms attain a catarrhal character, but should be renewed whenever suffocative attacks recur. — *Allgemeine Medicinalzeitung*, November 9, 1881.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, February 18, 1882.

THE STATE SOCIETY AND THE NEW CODE.

THE proceedings of the recent meeting of the Medical Society of the State of New York, were interesting from many points of view. As will be seen from our completed report in another place, many matters of scientific as well as of medico-political import were fully discussed and duly acted upon. The president's addresses were, as might have been anticipated, full of suggestions for the welfare of the profession and the extended usefulness of the Society. In his recommendations there was a breadth of view of the subjects touched upon, which properly reconciled the soundest conservatism with the most progressive liberality. The scientific papers were not so numerous as in former meetings, but were sufficiently so to give the session its most important, if not most attractive features. For obvious reasons the scientific discussions were not as we might wish them to be, the fact being that not enough time could be allotted to them.

The subjects bearing on medical politics, considering the attention they received, assumed a paramount importance. The recommendations from the State Society bearing upon the alteration of the present State law regulating the practice of physic, also those having reference to compulsory State examinations, were of great importance, and eventually received the necessary amount of endorsement for prospective advocacy before the Legislature. We can at this time, however, only refer to these subjects in passing, reserving the elaboration of their purpose and spirit for another occasion.

But what, for obvious reasons, claimed comparatively greater attention and invited a correspondingly wider range of discussion, was the new code of ethics offered by the committee appointed at the last meeting to consider the subject. The full text of the new code has already been published in our previous issue, and opportunity has been offered for its careful perusal and for a quiet study of its contents. We shall not now attempt to discuss the details of its many provisions, but be content to refer to what may be considered one of its principal features, and this has reference to freedom of action in regard to consultations with legally qualified practitioners. The ground assumed is viewed by many with great surprise. So far as we have been able to learn, the surprise, has, however, been an agreeable one, is very generally viewed as a step in the right direction, and is in so far a great improvement over the American code. It must be understood that the new code applies only to this State, and that we must consider it from the standpoint of State medical politics merely.

Viewing the decision of the State Medical Society in regard to such consultations in its broader sense, it is impossible to resist the conviction that it is one of wise liberality, as was the action taken by the Royal College of Physicians, to which we recently alluded. But they are by no means identical. We have in this State granted liberty of action to every medical man to consult with whom he pleases, but without making any declaration regarding liberty of belief. The Royal College of Surgeons granted liberty of belief and practice, but restricted its members from having professional communication with others who, perhaps, might entertain the same belief but who chose to trade upon a meaningless name. The actions of the two bodies are supplementary one to the other. If they could be properly reconciled, there is no doubt that the profession of medicine would be placed in a still better position before the public. On the general principle that regular medicine can lose nothing by being liberal, the step taken can only be viewed as the right one in a properly progressive direction. But this is not the only point to be considered at this juncture. There are those who may say that, not understanding the so called homœopathic doctrines, and not being familiar with the claimed effects of their medicines, they will be unable to hold a consultation, so called, on matters of treatment. This is certainly true, and must necessarily, for the present, at least narrow these consultations to questions of diagnosis. If the treatment is to be discussed the patient must make his choice of attendant. The code very distinctly provides for this. The effect of these consultations will, undoubtedly, lead to a better acquaintance on both sides with the therapeutical methods of each. The regulars can certainly lose nothing by knowing more of homœopathy, and the homœopaths will gain much by knowing more of our plans of treatment, with a proportionate benefit to their patrons and the public at large.

It remains to be seen what attitude the homœopaths may assume on the code. The wise course for them, as well as the interest of the public, is to

recognize the fact that opinion both in and out of the profession is opposed to bigotry and illiberality from whatever source. Many years ago the homœopaths adopted as their code of ethics the code of the American Medical Association without change, except as regards the consultation clause, which latter permitted them to call in council any physician whose opinion might in any manner tend to benefit the patient. The present code, which, so far as this State is concerned, supersedes the code of the American Medical Association, will probably come before them for adoption, backed by similar arguments which prompted the adoption of their existing code. There is hardly a doubt that the action taken by this State will be imitated by others throughout the Union. At least there are enough indications in that direction to predicate such a drift of medical opinion.

The relations of the State Society with the American Medical Association must be considered in this connection. The latter association may decline to receive delegates from the State Society. Whether it will or no remains to be seen. This point was seemingly fully considered by the State Society, at least this much can be assumed in view of the radical step which it has so deliberately taken.

In this whole matter it is well to note that a large number of the delegates and members were willing to go even farther, by virtually seeking to abolish all codes, and, as expressed in the substitute offered, to base the right of discipline upon such ethical questions only as were comprehended under the commission of acts unworthy a physician and gentleman. This substitute, notwithstanding the warm advocacy of its presentor, Dr. Roosa, failed on its final passage.

The discussion concerning the probable effects of some of the other changes engrafted in the new code must necessarily, to avoid an undue length of this article, be deferred to a future issue.

THE ANNUAL REPORT OF THE UNITED STATES MARINE HOSPITAL SERVICE.

The report of this service for the year 1881 contains some features which give it considerable interest.

The number of patients treated during the year was 32,613, being an increase of over 7,000 upon the previous year. In addition to the medical and surgical treatment given, 4,384 pilots were examined for color-blindness, and about 500 persons were examined as to their general physical condition.

The percentage of pilots rejected for color-blindness was 2.6. Since the total number—116—must have included a good many who were not completely color-blind, the inference may be drawn that color-blindness among this class is slightly below the general average.

The surgeon-general writes very warmly concerning the necessity of a physical examination of seamen before they are allowed to ship. He refers to the large amount of money expended on the Life-Saving Service, and argues that if more attention were paid to securing efficient crews, there would be fewer wrecks, and less demand upon that service. It is estimated that from one-tenth to one-sixth of the seamen shipped are physically incompetent for very active or severe work.

The need of a national snug harbor for aged and infirm seamen is shown, and action urged upon Congress. There is also a request for the erection of a hospital on Bedloe's Island, New York Harbor, the present buildings being insufficient and ill-adapted for their purpose.

A new feature in the reports of this service, is the introduction of a large number of medical, surgical, and sanitary reports. One of these documents consists of an account of over one hundred and thirty fatal cases, with their autopsical records. It forms a contribution to pathology of some value, although not many of the cases are rare, or are worked up with attention to microscopical details.

Some cases of aneurism, brain tumors, scurvy, splenitis, gastric ulcer, and syphilis of the brain, are of special interest. A case is reported in full by Dr. George Purviance, of a compound fracture of the skull, with elevation of the fragments. The patient had fallen into a bucket of the wheel, and struck the side of his head on a spike. A large fragment from the lower part of the parietal and upper part of the temporal was found elevated, and was removed. The patient made a rapid recovery.

By far the best contribution to medical literature in the volume, is a series of reports upon beri-beri. This consists of a report of the cases which occurred at San Francisco, and a report upon beri-beri in Ceylon. Plates are given showing the microscopical appearances of the blood. There is also a chart showing the geographical distribution of this disease.

DYSPEPSIA AMONG OUR FARMERS.

In the last annual report of the South Carolina Board of Health is an article by Dr. S. Baruch, now of this city, upon the "liver complaint" among the farmers and laborers of the South. It contains facts and suggestions which have a wide interest and importance.

In a long experience among the rural and laboring population of South Carolina, the author had noticed the great frequency of the so-called "liver complaint." The patients presented more or less of the following symptoms: "Face pale, skin shrivelled, tawny or tallowy, lips pallid, white of eyes bluish and glistening, tongue covered with a thin white fur, pain and fulness at pit of stomach after eating, nausea, eructation of gas or hot water (water-brash), oppression of chest after meals, palpitation

of heart, rapid breathing when walking fast, constipated bowels, languor, loss of appetite, wandering pains in various parts of the body, etc."

Now, these symptoms indicated, according to Dr. Baruch, not liver trouble, which is comparatively rare in the South, but dyspepsia. And the extreme frequency of this dyspepsia led our author to investigate its cause. This he found to lie in three things: improper food, improper cooking, and too rapid eating.

The food of the Southern laborer is chiefly "hog and hominy," *i.e.*, pork and corn-meal in various forms. As a rule, the pork used is salted. This process, according to Liebig, as quoted by Dr. Baruch, diminishes the nutritive value of the meat one-half. It also makes it less digestible. In addition to this, the constant use of the same kind of cooked food seems to have an injurious tendency. The Southern farmer, however, not only eats this pork constantly, but eats a great deal of it at a time. The remark is quoted that American laborers eat as much animal food in a day as would supply three laboring-men in Europe. Physiology indeed confirms what observation suggests, that man is essentially and distinctively a glutinous animal; and the American laborer seems to be a peculiarly good illustration of this anthropological characteristic.

Dr. Baruch describes the Southern mode of cooking food. His endeavors to be amiable in his criticisms do not disguise the fact that the country housewives make bad bread, doubtful pastry, and fry, with little skill, almost everything that can be cooked by that dyspepsia-compelling process. The frying-pan, however, is not a distinctively Southern institution, but is coextensive with the American eagle and the star-spangled banner. It is the *bête noir* of the hygienist, and has received deserved anathemas from every quarter. But it still maintains the supremacy which it gained in the kitchens of our fathers, and we fear is likely to continue to do so.

The evil results of rapid eating have been often told, with probably some good effect, especially upon the rising generation. It is children who must be taught to eat slowly, and the dyspeptic parents of the present day are making wise teachers.

The prevalence of dyspepsia among the rural population is not confined to the South. A somewhat similar account to that of Dr. Baruch was given some years ago by Dr. John Ordronaux, whose criticisms referred to New York and New England.

Suppuration Independent of Micro-Organisms. —Dr. Uskoff has shown, by a series of experiments recorded in Virchow's *Archives*, that suppuration may occur without micro-organisms. He admits, however, that these organisms are the causes of many cases of suppuration.

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-Sixth Annual Meeting, held in Albany, February 7, 8, and 9, 1882.

Tuesday, February 7th — First Day — Evening Session.

The society was called to order at 8 P.M. by the President.

The special order for the evening was the

REPORT OF THE SPECIAL COMMITTEE ON AMENDMENTS TO THE SYSTEM OF MEDICAL ETHICS.

The report of the committee [see Medical Record, February 11, 1882, p. 166] was read by Dr. H. G. Piffard, of New York.

On motion by Dr. C. R. Agnew, of New York, the report was accepted. Dr. Agnew also moved that the report be read seriatim, in order that each paragraph might be acted upon separately.

Dr. Roosa moved that the report as a whole be first discussed, and the amendment was adopted. He then took the floor and offered the following

SUBSTITUTE FOR THE REPORT OF THE SPECIAL COMMITTEE ON AMENDMENTS TO THE SYSTEM OF MEDICAL ETHICS:

"The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopt the following declaration, to take the place of the formal code of ethics which has, up to this time, been the standard of the profession in this State:

"With no idea of lowering in any manner the standard of right and honor in the relations of physicians to the public, and to each other, but, on the contrary, in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare that the only ethical offences for which they claim and promise to exercise the right of discipline are those comprehended under the commission of acts unworthy a physician and a gentleman.

"*Resolved, also*, That we enjoin the county societies and other organizations in affiliation with us that they strictly enforce the requirements of this code."

In supporting the substitute, Dr. Roosa said that he believed the report of the committee presented a great advance over anything which had been offered to the profession in this country. But his objection to this was that it had retained nearly every one of those things which, in the progress of time, had become distasteful to the profession of our day, and that against it the same intrinsic objections could be raised as against the old code. He believed that the sentiment of the profession of the State was in favor of wiping out the code of medical ethics from its beginning to the end. It might be asked, What will be our status in the American Medical Association, if we adopt such a sweeping article as this substitute? In answer it might be asked, What will our status be in that society if the report of the committee is adopted? Without doubt, if adopted, the

delegates from the Medical Society of the State of New York will be ruled out. But that was not the question. The only question was, whether it was right, and, if so, let the State of New York lead the van.

Dr. Piffard moved that the substitute be referred to the Standing Committee on Ethics to be reported upon next year. Lost.

The discussion was continued by Dr. Squire, of Elmira, who thought that the report of the committee came far short of what was necessary for a code of ethics, because it did not contain a single word concerning the importance of medical education, and permitted consultation with legally qualified practitioners who had little or no medical education. Again, there was nothing in it to show that there was a dividing line between the practice of medicine and quackery. Certain lines of the report were then read and criticised.

Dr. Vander Poel thought that when the real matter of fact was reached, there was not much difference between the report of the committee and the substitute offered by Dr. Roosa.

Dr. Piffard thought that Dr. Roosa's substitute was to the effect that we did not wish to have any code at all. He then discussed the question: Do we need a code at all? and reached the conclusion that some form of code was a necessity in order to protect the interests and dignity of the profession.

Dr. Sturgis, of New York, thought there was nothing whatever in the old code, practically, which restrained any member of the profession from breaking its provisions, and he was unable to see that the proposed code, reported by the committee, was any advance. In order to have restrictions of any value, a penalty must be attached to violations of certain rules; but no penalty was attached in either instance. He believed that the unwritten was much more stringent than the written law, unless a penalty was attached, and that without a penalty the written code would be violated continually.

Dr. Mosher, of Albany, asked how the proposed code could prevent the gross irregularities mentioned in the old code, and which, as had been claimed, would be committed should the substitute be adopted and the code swept away entirely? The code was applicable to those only who belonged to medical societies. Others could do as they pleased concerning advertisements, etc. If it could restrain only those in medical societies, did we need it? It was proposed to establish a rule permitting consultations with all legally qualified practitioners; would it not be better to abolish the old rule?

Dr. E. R. Squibb thought that if the medical profession was to open its doors entirely with regard to association with all other sects in medicine, the same liberality should be extended to members with reference to certificates of recommendation for medicines, foods, health-resorts, etc. He thought Dr. Roosa's substitute was more harmonious in itself that the report of the committee.

Dr. Agnew thought it would have been plainly outside of the function of the committee if it had recommended the abolition of the code. So far as he was personally concerned he leaned in the direction of the substitute offered by Dr. Roosa. But the question was whether the entire profession was ready, or whether it was for the best interests of the entire profession to sweep the code away entirely.

Dr. Noyes, of New York, thought that the spirit of the substitute was that of such rules as are applicable to the present status of the medical profession. He was sure it was the sense of the meeting to abolish the old code.

Dr. Wey, of Elmira, thought that some positive written law must guide the profession. We have not reached that degree of excellence which permits any one to be simply restricted by that golden rule, "Do unto others as ye would that others should do unto you." Some written code is necessary to regulate the conduct of men.

Dr. John P. Gray thought that no organization could live without rules, and therefore it was unwise to leave the members of the Medical Society of the State of New York to be guided by their personal judgment alone. The question was further discussed by Dr. Frazier and Dr. Roosa.

Dr. Moore, of Rochester, moved that the whole subject be referred to the American Medical Association. He was of the same opinion as Dr. Noyes, that the profession had entirely outgrown the swaddling clothes of the old code. He was willing to strike it all out and leave the question to the unwritten law. But he thought it unwise to reach the conclusion too hastily, or dislocate ourselves in this sudden way from the national organization.

Dr. Agnew thought that a question of this kind should not be carried to the American Medical Association.

On motion by Dr. Elsberg, Dr. Moore's motion was laid upon the table.

Dr. Seymour, of Troy, moved that the substitute offerred by Dr. Roosa be laid upon the table. Lost.

The substitute was then accepted by a vote of 39 ayes, 37 nays, but was declared lost, because a two-thirds vote is required to amend or alter the by-laws.

Dr. Piffard moved that the report of the committee be adopted.

Dr. Squibb moved as an amendment that the report, the substitute, together with the discussion be printed, and that the further consideration of the subject be postponed until next year.

Dr. Agnew moved as an additional amendment that the report, together with the substitute offered by Dr. Roosa, the suggestions made by Dr. Squibb, Dr. Noyes, and others be recommitted to the committee, with instructions to revise their report and present it to-morrow at 12 o'clock.

Dr. Agnew's motion was lost, as also was Dr. Squibb's.

The report of the committee was then adopted, ayes, 52; nays, 18.

The society then adjourned at 11.30 P.M., to meet on Wednesday at 10 A.M.

Wednesday, February 8th—Second Day—Morning Session.

The society was called to order at 10 A.M. by the Vice-President, Dr. William Govan, of Stony Point.

Prayer was offered by Rev. Dr. Wesley R. Davis.

The Committee of Arrangements announced the following as

MEMBERS BY INVITATION.

Drs. S. G. De La Mater, of Duanesburg; J. P. Creveling, of Auburn; J. F. Fox, of Cohoes; A. Ennis, of Pattersonville.

REPORTS OF COMMITTEES.

Dr. William C. Wey, Chairman of the Committee on By-Laws, reported that the amendments to by-laws submitted by the counties of Rockland, Greene, Fulton, and New York, were in accordance with the

by-laws of the Medical Society of the State, and recommended that they be approved.

The recommendation was adopted.

The committee also offered a resolution which the society adopted, directing such county societies as had not submitted their by-laws since 1880, to conform to the requirements of the by-laws of the State Medical Society in that respect.

RESOLUTIONS.

Dr. M. Perkins, of Schenectady, offered a resolution providing for the appointment of a committee to confer with the Director of the Dudley Observatory in Albany, and endeavor to secure the necessary arrangements for correcting and verifying clinical thermometers, as is now done at the Winchester Observatory at New Haven, Conn.

Dr. E. R. Squibb, of Brooklyn, believed that the multiplication of expensive bureaus would defeat the object gained by the great expense to which the Winchester Observatory had been in procuring the apparatus necessary for the proper performance of this work.

The resolution was lost.

Dr. Roosa, of New York, offered a resolution, and asked that it be laid over for one year. It proposed as an amendment to the by-laws the following: "That the only ethical offences for which they claim and promise to exercise the right of discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman."

Adopted.

REPORT OF THE TREASURER.

Dr. Charles H. Porter, of Albany, Treasurer, read his annual report, which showed a balance in the treasury of $453. It was referred to an auditing committee, consisting of Drs. Perkins, Beach, and Piffard, who subsequently reported that they had examined the books and vouchers, and found them correct.

Dr. Porter also reported that the fund for the

MERRIT H. CASH PRIZE ESSAY

had reached the sum of $127.12.

Dr. E. V. Stoddard, of Rochester, made a verbal report from the

COMMITTEE ON HYGIENE,

to take the place of the formal report to be submitted in writing to the Committee on Publication.

THE COMMITTEE ON EXPERIMENTAL MEDICINE,

through Dr. John G. Curtis, of New York, presented its report, containing the following preamble and resolutions, which were adopted:

Whereas, There is reason to believe that, like its predecessors, the Legislature of 1882 will be asked to pass an act to forbid or restrict the performing of experiments upon animals for scientific purposes.

Whereas, The performing of such experiments by unqualified persons is already illegal, under section 10 of the act approved April 12, 1867; now, therefore, be it

Resolved, by the Medical Society of the State of New York:

First.—That it is the unanimous opinion of the members of this society that the unrestricted performance, by qualified medical men, of scientific experiments upon animals is essential to the maintenance and progress of the science and art of medicine.

Second.—That, while this society would thus set forth to the Senators and Assemblymen in Legislature assembled the views of the medical profession of the State upon this subject, it also calls their attention to the fact that, at the late International Congress in London, a resolution condemning the present interference with experimentation upon animals was adopted by more than three thousand official representatives of the medical profession of the world.

Third.—That, in the event of the introduction of any "anti-vivisection bill" into the Legislature of 1882, it shall be the duty of the Committee on Experimental Medicine to forward a certified copy of these resolutions, as a memorial from the society to the Governor of the State of New York, and to each House of the Legislature thereof. Further be it

Resolved, That it is the duty of each member of this society, before leaving Albany, personally to lay the views of the society upon the so-called "anti-vivisection" agitation before the Senators and Assemblymen who represent him in the present Legislature.

Dr. E. R. Squibb offered a resolution, which was adopted, authorizing the Committee on Experimental Medicine to draw from the treasury a sum not to exceed $100, with which to defray their contingent expenses while carrying out the above resolutions.

Dr. Agnew, of New York, moved that the resolutions be printed immediately and distributed among the State officers and members of the Legislature,

Dr. Vanderveer, of Albany, from the

COMMITTEE ON LEGISLATION,

reported in favor of holding under advisement for another year the amendments to the law of 1872, and a new bill, entitled, "An Act to regulate the licensing of Physicians and Surgeons," communicated to the Society from the Medical Society of the County of New York.

After some discussion, the subject, on motion by Dr. Sturgis, of New York, was made the special order for 11 o'clock, Thursday,

On motion by Dr. Roosa, the society directed that the proposed bills be printed at once, and distributed among the members.

Obituary notices of Dr. William. S. Hoffman, of Port Byron, presented by the Cayuga County Medical Society, and Dr. Lake J. Zeffle, by Isaac Parsons, M.D., were read by title, and referred to the Committee on Publication.

Dr. Daniel Lewis, of New York, then read a paper on

THE TREATMENT OF SCARLATINA.

It will be published in a subsequent number of The Record.

Dr. W. W. Potter, of Buffalo, read a paper on the

GENU-PECTORAL POSTURE IN RETRODISPLACEMENTS OF THE UTERUS AND PROLAPSE OF OVARIES.

The author of the paper first referred to the means essential to the successful use of this measure, such as, 1st, a table; 2d, a speculum (he preferred Bozeman's); 3d, double-curved forceps; 4th, cotton-pledgets, prepared in advance; 5th, Albert Smith's pessaries of different sizes; 6th, astringent and sedative solutions.

His conclusions were as follows:

First.—That in a large number of cases of uncomplicated retroversion or of ovarian prolapse, the combined action of gravitation and atmospheric expansion of the vagina, obtained through the medium

of the knee-chest position, will effect replacement without instrumental aid.

Second.—That in cases of retroflexion, with fixation due to the products of cellulitis or other intra-pelvic viscera, and associated with prolapse and incarceration of one or both ovaries, the genu-pectoral posture affords the most rational way of treatment, for, in this position, the vagina can be most completely packed with the medicated tampons, which, by gentle pressure, reduce inflammation and promote absorption.

Third.—That in cases where there is fixation of the fundus uteri in the hollow of the sacrum, without adhesion, the tamponade of the vagina with the cotton-pledgets furnishes a complete and simple way of overcoming the malposition.

Fourth.—That retroflexions, after a course of treatment by these methods, are more readily straightened and rendered more tractable.

Fifth.—That in prolapse of the ovaries, replacement can be more readily obtained in this posture than in any other.

Sixth.—That the adjustment of pessaries is more accurately accomplished, and with less discomfort to the patient, if done in this posture. That complete reduction of the displaced uterus or ovary, or both, is a condition precedent to the successful employment of these instruments, and in this posture such reduction is absolutely possible.

Seventh.—That the self-assumption of the genu-pectoral posture by the patient each night, or even at other times, may be made a serviceable adjunct to the treatment. Furthermore, the frequent self-assumption of this position establishes the "habit" of replacement of the intra-pelvic organs and relieves pelvic blood-stasis.

AN IMPROVED DRESSING FOR FRACTURED CLAVICLE

was the title of a paper read by DR. LORENZO HALE, of Albany. The principle of the plan was the same as presented to the society, in 1870, by DR. E. M. Moore, of Rochester. It differed from it in being simply a suspender, "back sling," so applied as to bring the fragments into apposition, and leave the clavicle exposed to view.

Hold one end of a narrow roller-bandage against the scapula of one side, passing it under the forearm of the injured side near the elbow, the elbow being bent and drawn far back, thence up the same forearm, across the back to the axilla of the sound side, and then in front of and over the sound shoulder, uniting the end at the place of beginning.

The dressing was endorsed by DR. VANDERVEER as one which had given excellent results.

DR. H. KNAPP, of New York, read a paper on

CROUP OF THE CONJUNCTIVA, WITH REMARKS ON CONTAGIOUS FORMS OF CONJUNCTIVAL INFLAMMATION.

Croup of the conjunctiva was differentiated from diphtheria as follows:

First.—In diphtheria the lids are stiff and hard; it is almost impossible to evert them, whereas in croup the lids are supple and easily everted.

Second.—A diphtheritic lid is unusually hot and excessively painful to the touch, whereas a croupous lid can be handled without much pain.

Third.—The diphtheritic exudations are continuous from the deposit upon the surface to the superficial and deeper layers of the conjunctiva, whereas the croupous exudation is nearly a surface deposit.

Fourth.—The diphtheritic membrane cannot be easily removed and must be pulled off with some force, and leaves the subjacent tissue ragged; whereas a croupous membrane can be wiped away, leaving an uneven, finely granulated surface.

Fifth.—The tissue of a diphtheritic lid, when cut into, is anæmic and has in the developed cases a white lardaceous appearance; whereas the tissue of a croupous lid is highly congested and soft.

Sixth.—The diphtheritic process leads to mortification of the invaded conjunctiva; whereas the croupous process leads to proliferation, cauliflower, polypoid excrescences.

Seventh.—Diphtheria readily extends from the lids to the bulbar conjunctiva and cornea; whereas croup is long continued, and only in the severest cases affects the cornea.

DR. KNAPP also made some remarks concerning the utility of the methodical application of cold in the severer forms of conjunctivitis, and the general management of these cases.

They are all contagious and yet not so through infection, but only by inoculation.

Under *proper* care there is no danger of transmission even from one eye to the other. The patient [speaking especially of children] should *never* be left without a nurse.

As long as the disease is upon the increase, abstinence from the use of local remedies, the methodical and uninterrupted application of cold, and careful cleansing were the great essentials of treatment. Cold should be applied by means of thin cloth compresses, which cover nothing more than the burning lids, and made cold by lying upon a block of ice. These should be applied every fifteen or twenty minutes uninterruptedly.

There is no cleansing material equal to fine, soft sponge, and to see that they are properly disinfected is the surgeon's business, and *abundance* of water is a disinfectant which has stood the test of time.

As soon as the child shows a tendency to open the eyes, encourage the efforts, for movements of the lids are beneficial in diminishing congestion and infiltration, and keeping the purulent secretion out of the conjunctival sac. When the child opens the eyes the danger is over. The applications to the lids should be continued until the swelling and the creamy appearance of the pus have disappeared.

No child need lose its eyes from ophthalmic neonatorum. But incessant care is necessary. In adults, the treatment saves the great majority of cases. The same treatment holds good for croupous and diphtheritic inflammation. And in those cases the greater number of eyes could be saved; only rarely need eyes be lost if seen early, and treatment is properly continued.

DR. C. R. AGNEW, of New York, then read a paper on

CONTAGIOUS EYE DISEASE, AND SOME OF ITS RELATIONS TO BLINDNESS AND PAUPERISM.

These papers were discussed by DR. CHAS. S. BULL, of New York, who thought that all ophthalmic surgeons would agree with Dr. Knapp as to the distinct and separate processes of croup and diphtheria, and the persistent applications of cold, and also the very great necessity of watching these cases from the very beginning, *never leaving the patient.* He thought there was no necessity of losing an eye in ophthalmia neonatorum if the surgeon *saw the case early enough.*

DR. NOYES, of New York, spoke of the positive antiseptic influence of a solution of boracic acid for cleansing purposes, and of its superiority over simple water, in all forms of ophthalmia.

Dr. Roosa, of New York, thought that the basis of all real antiseptic surgery was cleanliness, and the basis of cleanliness was water. He believed that water was quite as bland, and on the whole as efficacious as boracic acid.

Dr Sherwell, of Brooklyn, was of the opinion that the benefit derived from the boracic acid was due to its stimulant action.

Dr. Agnew, of New York, was strongly opposed to the application to the eyes of water slop by means of rags. He had seen inflammation of the external auditory canal caused by the careless use of water, some of which found its way down into the ear and produced serious consequences. He recommended bits of muslin made cold by being placed upon a block of ice which is surrounded by a towel, so that they shall contain only a moderate amount of moisture.

Dr. Squibb said that the addition of a small quantity of chloride of sodium to the water rendered it more comfortable as an application to the inflamed conjunctiva.

The paper was further discussed by Drs. Piffard, of New York, and W. S. Ely, of Rochester.

Dr. J. O. Roe, of Rochester, then read a paper on

INTERNAL ŒSOPHAGOTOMY.

It will appear in full in a subsequent number of the Record. It was discussed by Drs. A. C. Post and L. Elsberg of New York.

Dr. S. B. Ward, of the Committee of Arrangements, nominated the following gentlemen for

MEMBERS BY INVITATION.

Drs. Henry T. Harris, of Laurens; L. H. Hills, of Cooperstown; T. M. Trego, of Albany; M. L. Bates, of Canaan Four Corners; John E. Burdick, of Rockwood; Charles W. Hamlin, of Middleville; F. J. Baker, of Youngstown.

The society then adjourned to meet at 3 P.M.

SECOND DAY—AFTERNOON SESSION.

The Society was called to order by the President.

The first paper was read by Dr. L. Elsberg, of New York, and entitled,

THE LARYNGEAL MUSCLES OF THE VOICE AND THE LARYNGOSCOPIC IMAGES OF THEIR PARALYSES.

The paper was illustrated upon the blackboard, and consisted of an anatomical description of the organ of the voice, and the appearances presented in the differential diagnosis of paralysis of the various muscles of the larynx.

IMPROVED METHODS IN LABORATORY TEACHING AND DEMONSTRATIONS IN HISTOLOGY

was the title of a communication made by Dr. William Hailes, Jr., of Albany. The speaker confined himself chiefly to the *technique* applicable to the working laboratories of medical schools, and described the method of making a large number of sections in a short period of time, by means of the freezing microtome, and of the method of teaching by means of outline charts suggested by Professor Sterling, of Scotland.

The paper was discussed by Dr. Joseph H. Hunt, of Brooklyn.

An obituary notice of Seneca Beebee, M.D., by Dr. F. Hyde, was read by title and referred to the Committee on Publication.

Dr. Austin Flint, of New York, then read a paper on "Physical Diagnosis by Means of Percussion and Exploration by Puncture in Peritonitis, with or without Perforation of the Alimentary Canal, and the Employment of Aspiration in Perforating Peritonitis."

TREATMENT OF DOUBLE TALIPES EQUINO-VARUS BY OPEN INCISION.

was the title of a paper read by Dr. A. M. Phelps, of Chateaugay. It will appear in full in a subsequent number of The Medical Record.

An outline of the history of eight cases was given, with illustrations. The operation consists in making an open incision across the sole of the foot, and dividing all the resisting structures down to the bones. In certain resisting cases, such as do not yield to ordinary means, division of the tendo-Achillis, etc.—perhaps one in ten or twenty—this method was believed to be applicable, and thus far it had given satisfactory results (see Medical Record, Vol XX., p. 189).

Dr. George H. Fox, of New York, then read a paper on

THE TREATMENT OF WINE-MARKS BY ELECTROLYSIS.

The object, as in scarification and puncture, is to excite sufficient inflammation to destroy the fine network of blood-vessels. A simple needle, or an instrument containing a dozen or more needles, with points upon the same plane and about two millimetres apart, is attached to the negative cord of a constant battery. These are quickly pressed into the skin and the electrolytic action serves to destroy the capillary net-work. The instrument used is a small brass disc, which carries numerous fine cambric needles. When the circuit is completed, a blanching of the tissue for a small space around the needles is immediately observed. With ten or twelve cells of an ordinary zinc and carbon battery, the needles should be allowed to remain ten to thirty seconds, depending upon the delicacy of the skin and the effect produced. The blanching disappears in a few moments. The effect of the electrolysis becomes evident in about three weeks. In aggravated cases, there might be a return of the color, when a very fine and flexible steel needle, introduced in an oblique direction beneath the skin to the depth of a centimetre or more, should be used. By this means he destroyed the larger vessels from which the supply of the capillary vessels was received. The objectionable features were that the operation was a somewhat tedious and painful one, a slight danger of causing suppuration and superficial sloughs, and a tendency to the formation of small keloidal-appearing outgrowths, and sometimes small ulcers and depressed scars, or small, firm vascular nodules. The operation does not leave a perfectly normal skin, but the condition may be greatly improved.

Dr. Sherwell, of Brooklyn, thought that the same results could be obtained by multiple puncture with a needle or disc of needles, the ends of which had been tipped with a caustic, as chromic or carbolic acid.

Dr. Knapp, of New York, suggested that if the starting-point of these marks could be found and destroyed, the remainder would be obliterated. An illustrative case was cited.

Dr. Sherman, of Ogdensburg, cited a case in which spontaneous ulceration occurred at the point, and produced the same result mentioned by Dr. Knapp.

Dr. Vanderveer, of Albany, then read a paper on

SUBCUTANEOUS SECTION OF THE FEMUR.

It consisted chiefly of the surgical history of a case. The patient was a girl nineteen years of age, who had extreme adduction of the thigh, as the result of inflammation and anchylosis of the hip-joint, following traumatism. She was referred to him by Dr. Peters, of Cohoes, and entered the Albany Hospital in August, 1881. Subcutaneous section of the neck of the femur was decided upon, and the operation was performed with the assistance of Drs. Ward, Mosher, Snow, and Hailes.

Dr. Shrady's saw and trocar was used, and he endeavored to divide the bone above the trochanter. The instrument worked in a perfectly satisfactory manner so far as the puncture was concerned, and when it had been carried between the femur and the blood-vessels the trocar was withdrawn, and the saw introduced, but it suddenly broke as the bone was being divided.

Dr. Vanderveer then immediately enlarged the external opening, withdrew the piece of the saw with a pair of forceps, and afterward divided the bone with an ordinary metacarpal saw, and concluded the operation. The tendons of the adductor muscles were divided. The wounds were treated antiseptically. No complication occurred in the wound made for division of the bone. A small abscess formed at the point where the tenotomy was done.

The result, one hundred and seventeen days after the operation, was that the patient could lie naturally upon the bed, could walk easily with a cane, and could bend forward and put on her stocking. The special points of interest were (1) the fracture of the saw, and (2) the uncertainty, for a time, whether or not a false joint would be formed.

The paper was discussed by Drs. S. B. Ward, of Albany, and Samuel Peters, of Cohoes.

Dr. H. D. Noyes, of New York, then read a paper on

DIVISION OF OPTIC AND CILIARY NERVES FOR SYMPATHETIC OPHTHALMIA.

This is a somewhat less severe operation than enucleation of the eye, and had been practised to such an extent as to make Dr. Noyes feel justified in throwing it into the current of general medical knowledge. The author of the paper gave a brief summary of the history of sympathetic ophthalmia, and spoke of the two forms, (1) the irritative, (2) the inflammatory. The irritative, characterized by difficulty in using the eye, photophobia, lachrymation, perhaps slight superficial inflammation, could be readily removed by enucleation of the offending eye. The more severe form of the second class of cases was not amenable to surgical treatment. The two forms might merge into each other. The causes were found chiefly in injuries about the ciliary region. Enucleation was effective in the irritative form of the affection, and in some of the milder cases of the inflammatory form of the disease, but there had been some rare disappointments.

Ten cases had been reported in which sympathetic ophthalmia had occurred in the remaining eye a considerable period of time after enucleation of the eye which had given rise to the trouble. These cases indicated that removal of the eye had not been successful in preventing serious mischief from occurring in the fellow-eye.

The history of the operation of dividing the optic and ciliary nerves was then given, and the method of performing it described. He had performed it in five cases, and of those three had been under observation for some time. His conclusions were, that the operation removes tenderness and the tendency to repeated attacks of inflammation in some cases, yet tenderness has returned in certain cases, and there are *three* cases upon record in which, despite the operation, sympathetic inflammation occurred in the sound eye. The operation was to be regarded as still under trial, but the evidence was in its favor in certain cases. If it failed, it could be supplemented by enucleation.

Dr. Knapp, of New York, had performed the operation in nine cases, which he had reported, and all did well, except one in which gangrene of the globe occurred. In many cases, however, the operation had been inefficient, and in three or four instances death had occurred in consequence of it, according to reports made at the International Medical Congress. He believed that experience did not warrant ophthalmic surgeons in substituting this for the safer and more efficient operation, enucleation.

Dr. Roosa, of New York, also believed that the opinion of ophthalmologists was decidedly adverse to any further trial of the operation as a substitute for enucleation in the prevention of sympathetic ophthalmia.

Dr. Noyes said that he had attempted simply to convey to the profession at large the facts concerning the operation as they stand at the present time. Of the fatal cases he had not had any knowledge, because the transactions of the International Congress are not yet published, but was thankful for the knowledge which had come to Dr. Knapp, and which he had communicated to the society. The paper was further discussed by Drs. H. Jewett, of Canandaigua, and L. Howe, of Buffalo.

Dr. L. D. Bulkley, of New York, then read a paper on

THE MALIGNITY OF SYPHILIS, WITH AN ANALYSIS OF FOUR HUNDRED AND FIFTY CASES.

The conclusion reached by the author of the paper, was, that syphilis should not be regarded as benign in any sense of the word. Special reference was made to the Prize Essay by Dr. C. F. Dana on the Benignity of Syphilis, but Dr. Buckley regarded Dr. Dana's conclsions as those based upon insufficient data, and the result of too slight experience to be authoritative.

An obituary notice of James P. White, M.D., of Buffalo, by Dr. Austin Flint, was read by title and referred to the Committee on Publication.

MEMBERS BY INVITATION.

Drs. Isaac DeZouche, of Gloversville; A. Nellis, of Port Jackson; O. D. Ball, of Albany; D. E. Walker, of Ilion; and C. W. Hamlin, of Middleville.

The society then adjourned to meet in the Assembly Chamber at 8 P.M., to listen to the President's address.

Second Day—Evening Session.

The society convened in the Assembly Chamber, and was called to order at 8 P.M. by the Vice-President, Dr. William Govan, of Stony Point.

The President, Dr. A. Jacobi, of New York, then delivered his address, the subject of which was

INFANT FEEDING AND INFANT FOODS.

One of the measures contemplated and advised in the report of the committee appointed to co-operate

with the Society for the Prevention of Cruelty to Children, was that there should be a place, or places, in larger cities where infants and young children of the poor might be supplied at cost with the simple, though sufficient articles of food—milk, barley, oatmeal, eggs. Their value had been considered almost as an axiom; to make it so had been one of the duties of his life. Truth, however, was frequently suspected because of its simplicity, and often did we see complicated means and measures resorted to in preference to plain and direct ones. To render the results hitherto obtained available, the normal feeding of infants possible, and to protect them from the injuries inflicted by ill-directed love, ignorance, and evil-devised plans and frauds of what is called commerce and industry, was the object of his remarks concerning the dangers to which infants are exposed.

The speaker then referred to the great mortality among infants, and also to the additional fact that of all that die before one year of age, death is the result, in forty to fifty-three per cent., of diseases of the organs of digestion. It was an axiom that breast milk of the mother or wet-nurse was the best preventive against such diseases. The mother who refused to nurse her baby during the first two months of its life, was an accomplice, perhaps the only cause of the death of her offspring. Intestinal disease, however, might occur despite nursing at the breast, and babies might also be sick because of being at the breast. It was with these cases that both mother and physician should be familiar. Attention was then directed especially to the great dangers attending the use of breast-milk of the mother or wet-nurse. Long ago had he formulated his views in the words, "Milk secreted from an insufficient mamma by a woman not in full health and vigor, by an old woman, by a very young woman, by an anæmic woman, by a convalescent woman who has consumed a large amount of her albumen, by a neurotic woman, milk which has not the normal transformation of the elements of the mammary glands, but consists of more or less transuded serum, is apt to be impregnated with elements circulating in the blood."

Infants who are deprived of breast-milk should be supplied with food as nearly like mother's milk as possible. The differences between cow's milk and human milk were then pointed out, such as the variation in the percentage of fat, casein, etc., and therefore it required considerable modification before it was suitable for infant food. The percentage of fat and casein was larger in cow's than in human milk, and there was no known process by which the absolute quantity could be reduced without rendering the remaining part unfit for use. The objection to cow's milk depended upon its chemical composition and physical properties, and yet those could not be changed by the most studious and successful procuring of as uniform and pure article as possible.

But he was far from saying that cow's milk, given pure or mixed with water, was absolutely injurious to babies. The fact that many babies thrive upon it whose general health remained good, certainly would disprove such an exaggerated opinion. Yet there were many infants who appeared to thrive better than they actually did. There was no food, however, upon which a certain number of infants would not thrive. But it simply proved that nature did no tontine work, that the sum total of vital processes did not respond to certain occurrences or influences like reagents in a chemical test. Cow's milk, as a universal substitute for human milk, had lost its credit with many, though the differences in the article, so long as no adulterations were perpetrated, were very much less than in the same secretion of the human being. If that were not so, how did it occur that all over the civilized world substances were sought for and offered, though milk be as cheap and easily obtained as anything else? Why was it that to cure the evils alluded to, untold risks were run in the procuring of more expensive, more unknown, and more unreliable vegetable compositions, which seldom kept the promises loudly displayed upon the labels? An ideal article of food must serve two purposes, and contain two classes of constituents. It must, in the infant, supply the growing tissue with material sufficient to take the place of that constantly being wasted, and allow a surplus for increase; and, secondly, supply fuel for the purpose of keeping up the production of an equable temperature and the functions of the organs, mainly those of respiration. The first indication was fulfilled by the albuminous substances, and the other by the carbohydrates. The first, in milk, was represented by casein, and the second by fat and sugar. In vegetables the first class was represented by gluten, and the second mainly by starch. In the ideal food the proportion of the first to the second class is about 1 : 4.

The changes in these substances were then studied as they occur in the laboratory and in the process of digestion. Special attention was then directed to the numerous artificial foods, and in general terms all were condemned. He hoped that the extensive fraud could be stopped and the nefarious traffic be suppressed. With regard to the growing evil, which had assumed such vast proportions, the profession, to a certain extent, were at fault. There were but few who were not aware of the inexpediency and sometimes danger attending the exclusive feeding with cow's milk and sought for other substances. Professionally we had come to look upon the sale of patented foods as something quite unobjectionable. Those imbued with the strictest sense of ethics, who would not patent an invention nor tolerate the fellowship of a professional man who did so, and frowned upon patented medicines, forgot their habits and principles when the question of patent right and secresy came up with regard to patented foods.

Many of the scientific journals in Europe, dedicated to the study of diseases of children, were frequently used for the purpose of discussing the merits and effect of some new infant food, and it only showed to what extent the evil had grown. Many of the articles offered were unmitigated frauds, and only a very few had an available composition. Although the rule held good that food for infants should be largely diluted, it did not follow that water alone was the proper diluent for the casein of cow's milk. To secure the ordinary loose flakes of casein which existed in mother's milk, there must be added to cow's milk some farinaceous substance, and of those he had only two to recommend, namely, barley and oatmeal. The reasons for recommending these articles were then given. Reference was also made to the necessity and importance of adding chloride of sodium, the more important the more the milk was mixed with a vegetable substance.

It was not wise to forget that nature was republican in principle and democratic in practice. If too often there was no equality before a court of justice, there was equality before that of physiological law.

On motion by Dr. S. O. Vander Poel, of New York, a vote of thanks was tendered to the President for his valuable and instructive paper.

The society then adjourned, after which the Annual Banquet was given at the Delavan House.

THURSDAY—FEBRUARY 9TH—THIRD DAY.

The society was called to order at 10 A.M., by the President, and prayer was offered by REV. JAMES H. ECOB.

A communication from Otsego County was presented by the Secretary, and referred to the Committee on By-Laws.

REPORT OF THE COMMITTEE ON THE PRESIDENT'S ADDRESS.

The committee submitted its report, which contained the following resolutions:

Resolved, That this society endorses, to the fullest extent, the sentiment expressed by the President in relation to the employment of children of tender age or immature development in factories and manufacturing establishments, and request that the Committee on Legislation prepare a bill for passage by the Legislature which shall include the suggestions of the President,

Resolved, That, from the extreme contagiousness of scarlet fever and diphtheria, a contagiousness which is probably limited to a restricted area, and not conveyed to any distance atmospherically, this society favors the absolute isolation of such cases of sickness, even in instances where every attainable luxury and comfort surrounds the patient, and expresses the urgent necessity for the erection of special hospitals for the care of patients sick with these diseases; and, further, that from the feeble dissemination of these poisons by the atmosphere, such hospitals may be erected with safety to others, even in thickly-settled parts of cities.

Resolved, That with a view to the elevation of the standard of attainment of those entering the profession, and also the establishment of a uniform grade, as far as possible, the conferring of the title of Doctor in Medicine should be by Medical Colleges, only after the examination and recommendation of an independent board of examiners, which board shall be common to all the colleges.

Signed, E. M. MOORE.
S. O. VANDER POEL.
WILLIAM C. WEY.
JOHN P. GRAY.

The resolutions were unanimously adopted.

The committee appointed to co-operate with the Society for the Prevention of Cruelty to Children, reported progress, and the President appointed Dr. C. R. Agnew to fill the vacancy made by the death of Dr. James P. White.

VACCINATION.

DR. A. FLINT, of New York, offered the following preamble and resolution, which were adopted:

Whereas, Efforts have recently been made in this country to excite in the minds of ignorant people a prejudice against vaccination,

Resolved, That this matter be referred to the Committee on Experimental Medicine, and that this committee be empowered to take such measures as may seem to its members requisite for the protection of public health.

On motion, Dr. Flint was added to the Committee on Experimental Medicine.

EXPERT TESTIMONY.

DR. JOHN P. GRAY, of Utica, offered the following preamble and resolution, which were unanimously adopted:

In view of the important relations of the medical profession to the administration of justice, the time has arrived when this society should declare its opinion upon the proper functions and limits of medical expert testimony. Therefore be it

Resolved, That the true function of the medical expert is to expand and interpret the results of pathological conditions, and that in the absence of disease he is not justified in drawing conclusions as to civil responsibility from moral manifestations of conduct, that department belonging exclusively to law.

Upon resolution Dr. Gray was requested, and assented, to prepare, and read a paper on the above subject at the annual meeting in 1883.

PAPERS BY TITLE.

The following were read by title, and referred to the Committee on Publication: "The Early Diagnosis of Pott's Disease," by V. P. Gibney, of New York; "The Significance of Pain Referred to the Ear," by D. B. St. John Roosa, of New York; "Cases of Glaucoma, in which Iridectomy on one Eye Seemed to Precipitate an Attack of Acute Glaucoma in the Fellow Eye," by D. Webster, of New York; "A Few Original Thoughts on Cholera," by H. Raymond Rogers, of Dunkirk; "Facial Paralysis Occurring in Connection with Aural Disease," by S. Sexton, of New York; "Inflammation of the Shoulder Joint, Resulting from Hemiplegia," by L. E. Felton, of Potsdam; "Report of a Case of Molluscum Fibrosum," by George G. Hopkins, of Brooklyn.

THE LENGTH OF PAPERS AT FUTURE SESSIONS OF THE SOCIETY.

DR. E. R. SQUIBB, of Brooklyn, offered the following preamble and resolutions, which were unanimously adopted:

Whereas, The rule adopted in this annual meeting of limiting the time of reading for each paper to twenty minutes has very materially facilitated the business of the sessions, and enabled the Society to avail itself of all the material offered; therefore

Be it Resolved, That it recommend to readers of papers for future sessions of the Society either to limit the length of the paper to twenty minutes, or, when this cannot be done, to prepare an abstract which can be read within the prescribed time.

Resolved, That any motion to extend the prescribed time shall not be in order.

DR. D. H. GOODWILLIE, of New York, then read a paper entitled,

APPLICATION BY INSUFFLATION OF MEDICATED POWDERS TO THE UPPER AIR PASSAGES, FOR THE RELIEF OF CATARRHAL CONDITIONS.

The author of the paper believes that naso-pharyngeal catarrh, as met with by the general practitioner, begins in most cases in childhood. He also believes that the affection can be treated most efficiently by means of powders, when sufficiently fine and properly applied. It is absolutely essential that the powders be as nearly impalpable as possible. The only place at which properly triturated powders can be obtained is P. H. Schmidt's instrument store, corner of Broadway and Thirty-fourth Street, New York.

The following formulæ were given:

℞. Benzoin ..... ʒ j.
Morphiæ muriate ..... gr. vi.
Bismuth subnit.,
Potas. nitrat ..... āā ʒ ss.
M. et triturate.

Valuable for its sedative action and to be used in hyperæmic condition with pain. In the beginning of an attack of rhinitis, coat the mucous membrane thoroughly with it.

℞. Alum ..... ʒ ss.
Gum acacie,
Bismuth subnit.,
Potass. nitrat ..... āā ʒ ij.
M. et triturate.

Useful where a strong astringent is indicated. In cases of hemorrhage, remove all the clot, and apply the powder abundantly until the bleeding ceases.

The powder-blower which he recommended was that devised by Dr. Andrew H. Smith, of New York.

Dr. Roosa said that a powder-blower, identical with Dr. Smith's, was invented by Dr. Ely, of Rochester, about sixteen years ago.

Dr. E. H. M. Sell, of New York, then read a paper

ON THE USE OF AVENA SATIVA.

The reader spoke of the history and medicinal properties of the drug, and gave them as laxative, tonic, and stimulant, especially a nervous stimulant. The concentrated tincture was the most available preparation, and he had used it with extraordinarily favorable results in the treatment of inebriety and the opium-habit. Cases were given.

Dr. E. R. Squibb objected to the reception of the paper and its appearance in the transactions, because it contained statements so broad and so extraordinary, without corroboration by testimony other than that given by the reader of the paper.

Dr. Sell being a delegate, the President ruled that the objection could not be entertained, but that the Committee on Publication had discretionary power.

The hour having arrived for the special order, namely—

COMMUNICATION FROM THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Dr. W. M. Carpenter offered the following preamble and resolution, which were seconded by Dr. Squibb and subsequently adopted:

Whereas, The Medical Society of the County of New York, in its efforts to enforce the medical law passed May 29, 1880, have found that it is inefficient in certain respects relating to the conviction and punishment of illegal practitioners.

And Whereas, The belief is that an act can be so drawn as to promote the interests of the medical profession, secure the conviction and punishment of illegal practitioners, and effectually aid in the suppression of quackery.

Be it Resolved, That the Medical Society of the State of New York sympathizes with the movements of the Medical Society of the County of New York already made in its efforts to carry out the provisions of the medical law passed May 29, 1880, and also approves of the continued efforts of that society to secure the enactment of such amendments, or the passage of a new bill, as will aid in the conviction and punishment of illegal practitioners, and in the suppression of quackery.

Dr. Stiegis explained as to the objects sought after in the proposed new bill to regulate the licensing of physicians and surgeons, and, on motion, they were approved of, and the bill was recommitted to the Committee on Legislation, with instructions to perfect it by the aid of legal counsel, and recommend that it become a law.

On motion, the proposed act to amend "An Act Relating to the Examination of Candidates for the Degree of Doctor of Medicine," chap. 746 of the laws of 1872, was approved and recommitted to the Committee on Legislation, to be recommended for passage by the Legislature.

Dr. Thomas R. Pooley, of New York, then read the following

REPORT OF THE COMMITTEE ON NOMINATIONS.

For President.—Harvey Jewett, of Canandaigua.

For Vice-President.—E. D. Ferguson, of Troy.

For Secretary.—William Manlius Smith, of Manlius.

For Treasurer.—Charles H. Porter, of Albany.

For Censors.—Southern District: J. W. S. Gouley, C. R. Agnew, Austin Flint, of New York. Eastern District: C. E. Nichols, M. H. Burton, W. S. Cooper, of Troy. Middle District: Alonzo Churchill, S. G. Wolcott, J. K. Chamberlayne, of Utica. Western District: C. C. Wyckoff, Thomas F. Rochester, of Buffalo; Henry Lapp, of Clarence.

Committee of Arrangements.—S. B. Ward, and J. S. Mosher, of Albany; and William S. Ely, of Rochester.

Committee on By-Laws.—William C. Wey, of Elmira; Alexander Hutchins, of Brooklyn; William Manlius Smith, of Manlius.

Committee on Hygiene.—E. V. Stoddard, of Rochester; Stephen Smith, of New York; Jacob S. Mosher, of Albany; J. Foster Jenkins, of Yonkers; Caleb Green, of Homer; Edward Hutchinson, of Utica; Theodore Dimon, of Auburn.

Committee on Legislation.—William H. Bailey and A. Vanderveer, of Albany; F. R. Sturgis, of New York.

Committee on Medical Ethics.—C. R. Agnew, of New York; E. M. Moore, of Rochester; S. O. Vander Poel, of New York.

Committee on Prize Essays.—Thos. F. Rochester, of Buffalo; W. S. Ely, of Rochester; W. W. Potter, of Buffalo.

Committee on Publication.—Wm. Manlius Smith, of Manlius; Chas. H. Porter, of Albany; H. D. Didama, of Syracuse; J. Foster Jenkins, of Yonkers.

Censor of College of Medicine, Syracuse University.—John W. Whitbeck, of Rochester.

For Permanent Members.—First District: G. H. Fox, F. R. Sturgis, Louis Elsberg, of New York; John D. Rushmore and F. W. Rockwell, of Brooklyn. Second District: E. H. Loughran, of Kingston; Samuel Swift, of Yonkers. Third District: F. C. Curtis, of Albany; W. S. Cooper, of Troy. Fourth District: Lucius E. Felton, of Potsdam; F. L. R. Chapin, of Glens Falls. Fifth District: Wm. H. Johnson, of Port Leyden; D. Pardee, of Fulton. Sixth District: B. F. Smith, of Mt. Upton. Seventh District: Joseph P. Creveling, of Auburn. Eighth District: Thos. M. Johnson, of Buffalo; J. O. Roe, of Rochester.

For Honorary Members.—Chas. N. Hewett, of Red Wing, Minn.; Roberts Bartholow, of Philadelphia; Sidney Ringer, of London.

Eligible to Honorary Membership.—Theodore G. Wormley, and William Goodell, of Philadelphia.

Delegates to State Medical Societies.—New Jersey: N. C. Husted, of Tarrytown; Wm. Govan, of Stony

Point; Jas. C. Hutchison, of Troy. Massachusetts: G. G. Monroe, of Crary's Mills; E. N. Brush, of Utica; Peter V. S. Pruyn, of Kinderhook. Ohio: Thos. R. Pooley, of New York. Pennsylvania: H. C. May, of Corning; Solomon Van Etten, Port Jervis; J. W. Moore, of Cohoes. Vermont: Lyman Barton, of Willsborough; A. M. Phelps, of Chateaugay. New Hampshire; Wm. M. Chamberlain, of New York.

Delegates to the Canadian Medical Association.—John Gerin, of Auburn; D. V. O'Leary, of Albany; L. E. Felton, of Potsdam; L. C. Dodge, of Rouse's Point.

Delegates to the American Medical Association.—Wm. C. Wey, of Elmira; C. R. Agnew, S. O. Vander Poel, H. G. Piffard, D. B. St. John Roosa, F. R. Sturgis, A. Jacobi, F. H. Hamilton, Fordyce Barker, L. A. Sayre, Wm. M. Chamberlain, L. D. Bulkley, A. V. B. Lockrow, and Daniel Lewis, of New York; E. R. Squibb, and J. C. Hutchison, of Brooklyn; Wm. H. Bailey, of Albany; E. M. Moore, of Rochester; E. S. Howe, of Black Brook; Harvey Jewett, of Canandaigua; John P. Gray, of Utica; T. B. Reynolds, of Saratoga; N. C. Husted, of Tarrytown; Geo. J. Fisher, of Sing Sing; J. Foster Jenkins, of Yonkers; Thos. F. Rochester, of Buffalo; Frederick Hyde, of Cortland; G. H. B. Spencer, of Watertown; Maurice Perkins, of Schenectady; Theo. Dimon, of Auburn; and J. H. Chittenden, of Binghamton.

On motion by DR. SAYRE the report was accepted, and the secretary was instructed to cast an affirmative ballot for all the candidates placed in nomination.

On motion by DR. JOHN P. GRAY, the thanks of the Society were tendered to the Committee of Arrangements for the efficient manner in which they had discharged their duties.

On motion by DR. STURGIS, the boards of censors of the county societies were asked to report their proceedings to the Committee on Legislation on or before January 5, 1883, in order that the work might be summarized before the occurrence of the next annual meeting.

The Business Committee announced that there was no further business, and recommended that the society adjourn.

The President thanked the members for the uniform kindness and courtesy which he had received at their hands, and declared the society adjourned, to meet in the City of Albany on the first Tuesday in February, 1883.

ACUTE GLAUCOMA CURED BY ESERINE.—Dr. C. J. Lundy reports a case of acute glaucoma of the left eye, occurring in a young man of good health and steady habits. The patient was seen three days after the symptoms appeared. These symptoms had been congestion, irritability, pain, and impaired vision. When seen, the eye was causing intense pain. There was ciliary congestion, profuse lachrymation, dilated and immovable pupil; the eyeball of a stony hardness; vision blurred, colored rings being seen when looking at a light. The case was considered one of acute glaucoma. The patient refused to allow an operation.

Local depletion was employed, and a few drops of a two-grain solution of eserine were instilled into the eye every fifteen minutes. It was then used every hour. Next day he was much better. The eserine was continued every two hours. In four days all glaucomatous symptoms had disappeared. Dr. Lundy thinks that eserine is a good substitute for iridectomy in a certain proportion of cases.

Correspondence.

THE QUESTION OF REFLEX DISTURBANCES FROM GENITAL IRRITATION.

A REPLY TO DR. GRAY.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: The points at issue between Dr. Gray and myself can be briefly stated.

He publishes an essay on "The Effect of Genital Irritation in the Production of Nervous Disorders,"* without any reference to my contributions† upon the same subject. Dr. Gray, who does not deny that he knew of the existence of these papers when he wrote his essay, adopted very much the same line of thought and "covered" very much the same ground that I did in my articles. In a note to the RECORD (January 14th) I called attention to these matters, and the result is shown in his equivocal reply of the 4th inst.

Dr. Gray does not disprove any of my charges. He does not tell us why it is that in his essay, which he says in his reply contains "a long review of the literature of the subject," he made no reference to my papers. He makes isolated and disjointed quotations from the most unimportant parts of my contributions, and misrepresents me by saying that I have "distinctly stated" that which I never stated. Those who have read Dr. Gray's essay and my papers will plainly see wherein he has followed me. Those who have not done so would scarcely be entertained by a long series of quotations from the subject matter of our papers. It would be a very easy matter, however, to establish the identity of ideas by direct quotations.

I will briefly notice some questions raised by Dr. Gray in his reply.

In the closing paragraph of his letter, Dr. Gray ignores the fact that my connection with the editorial staff of the *Annals* gave me the privilege of knowing whether the unpublished portion of his essay contained any reference to my papers. Knowing that it did not, and as my complaint was addressed to the readers of the RECORD, who had nearly two months previously seen its extensive report of Dr. Gray's remarks, I felt that if I was going to address the readers of the RECORD at all I ought not to delay. Dr. Gray's reply plainly indicates that my action was in no way premature.

I regret very much that Dr. Gray should have resorted to actual misrepresentation in his reply. He says that I have "distinctly stated that this cause" (of reflex paralysis) "is always a lateral sclerosis with ataxia." I made use of no such expression, and the word "ataxia" is not to be found in my papers.

What I did say in my first paper was this (page 246): "Among the many cases of so-called reflex *paralysis* that I have seen I have found none that did not prove to be a lateral sclerosis of the cord, with a greater or less modification of co-ordinatory power. In some instances the lack of co-ordination would be so slight that, under ordinary circumstances, no deviation from the normal would be noticed. Some movements would be awkwardly executed, especially those developed by running or jumping, or

---

*Vide MEDICAL RECORD, November 19, 1881, and The Annals of Anatomy and Surgery, January and February, 1882.

†Indiscriminate Circumcision (editorial), Annals of Anatomy and Surgery, May, 1881; and Genital Irritation (editorial), Annals of Anatomy and Surgery, July, 1881.

there would be *a slight ataxic movement* of one or both the lower extremities in the ordinary movements." I have italicised "paralysis" and "a slight ataxic movement" for obvious reasons.

I am at loss to know how Dr. Gray could refer to the paragraph containing the phrase "a slight ataxic movement" as an "original description of a lateral sclerosis with ataxia."

In the minds of some the word "ataxia" has a restricted meaning, and is associated with "locomotor ataxia." By transforming the word "ataxic" into "ataxia," Dr. Gray would attempt to bring ridicule upon my papers, which he has been willing to follow quite closely without giving that credit which the courtesy of the profession demands.

From the earliest writers to the present time, the adjective "ataxic" has been used in its etymological sense. The unauthorized appropriation and restricted application of it by some neurologists have resulted in confusion, of which Dr. Gray is willing to avail himself. But this does not excuse the unwarrantable substitution of the noun "ataxia," which I do not use, for the adjective "ataxic."

The latest authoritative dictionary—that now being issued by the New Sydenham Society—thus defines "ataxic": "Of or belonging to ataxy, as occurring in the progress of diseases or the natural animal functions; irregular." "Ataxy" is defined: "Irregularity; want of order." Ataxic aphasia, ataxic fever, ataxy hysterical, ataxy locomotor, etc., are then separately defined. And the definition of "ataxia" is thus stated: "A term for irregularity, want of order, especially of the pulse." All the standard French and English dictionaries that I have consulted give very much the same definitions as the New Sydenham. Bartholow, Roberts, Aitken, Trousseau, and many other authoritative writers on general medicine, also use "ataxic" in its general sense.

It may be unnecessary for me to state that in using the phrase, "a slight ataxic movement," I used the word "ataxic" in its proper sense.

Referring again to Dr. Gray's statement that I have "distinctly stated that the cause is always a lateral sclerosis with ataxia," I beg to call his attention to the fact that in my first paper I made a sufficient distinction between reflex *paralysis* and reflex *symptoms not paretic*. In my second article (p. 48), after describing a case of post diphtheritic paralysis, "cured" by circumcision, I say: "And so it has proved in every case of 'reflex paralysis' we have seen. A careful inquiry into the details of the previous history, a painstaking study of the symptoms and condition, develops a cause for the 'reflex paralysis' wholly unconnected with the undeveloped genital organs of childhood."

Dr. Gray formulates the following conclusions at the end of his essay proper (page 85):

"*First.*—There is no proof that genital irritation can produce a reflex paralysis."

There is not a page in my editorials in the *Annals* from which I could not quote to demonstrate that both my papers were written for the purpose of establishing this conclusion—which is, in reality, the only important one, all the others being more or less corollaries. I know of no other writer who anticipated me in my remarks bearing on this point. Nor does Dr. Gray, in his reply, attempt to prove that my contributions upon this essential point were not original.

Dr. Gray's remaining conclusions are as follows:

"*Second.*—That while it is probable that slight nervous disorders, as incontinence, retention, difficult micturition, erratic movements and slight nervous disturbances can be produced by genital irritation, the proof is not yet complete.

"*Third.*—That operations for the removal of genital irritation may be beneficial even in organic nervous disease.

"*Fourth.*—That we should therefore remove such genital irritation if it exist in any case whatever, and thus give our patients the benefit of the doubt.

"*Fifth.*—That in all cases with accompanying genital irritation we should not regard the latter as the cause of the former until all probable and even possible causes have been rigidly excluded.

"*Sixth.*—That operations upon the genitals, even where there be no genital irritation, may prove to be a useful therapeutic measure in certain cases."

I made no claim to have "covered" *all* of Dr. Gray's conclusions. I said "the most important." I make no comments whatever upon these conclusions (except the first). Those who have read my papers will see, however, that they are the legitimate outcome of my original position that there was no such condition as *reflex paralysis from genital irritation*, and it can easily be demonstrated that the most important of these conclusions were "covered" by my editorials.

These six conclusions that I have thus quoted are those stated by Dr. Gray in the *Annals*. In his reply to my letter in THE RECORD of February 4th, he omits the *First*, the *Second*, and the *Fifth*, and states, without their accompanying numbers, the *Third*, the *Fourth*, and the *Sixth*, thus conveying the impression that these were *all* of his conclusions. Why does he omit the *First*, the *Second*, and the *Fifth*? I think no one will deny that they are "the most important." Was it not that these, "the most important conclusions reached by Dr. Gray," had been so evidently "covered" by the articles he had so completely ignored, that he would have convicted himself had he reproduced them in his defence?

Very truly yours,

NEWTON M. SHAFFER.

No. 31 WEST THIRTY-SIXTH STREET, N. Y.,
February 12, 1882.

RELAXATION OF DORSAL MUSCLES, AGGRAVATED DOUBLE HERNIA, CHRONIC CYSTITIS, AND CONVULSIONS DUE TO A CONTRACTED PREPUCE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dr. Chas. A. Hart's cases of uræmic poison in an infant, and death from convulsions—reported January 21st in the MEDICAL RECORD—prompts me to give the following cases that have recently come under my own observation, and to emphasize more emphatically his statement that abnormalities of the prepuce are a frequent cause of obscure nervous troubles in children. The able paper written by Dr. Lewis Sayre years ago put me on the trail. And I have often verified his statements, and promptly given relief by circumcision to children who had been dosed in vain with spirits of nitre for retention of urine, as well as by other expedients equally as unwise and as unreasonable. These may be trite statements to the veterans, but they are facts to be remembered by new recruits, even as the commandments of Moses (who early recognized the impor-

tance of circumcision) must be repeated again and again to those who would be versed in all the law, and know their whole duty. The first patient was the son of a lawyer, aged two and one-half years, with relaxation of the dorsal muscles, presenting an anterior curvature of the spine, and with a hernia on each side that were with difficulty retained by a truss, and were made worse by the frequent bearing-down or straining efforts to urinate, owing to the mechanical obstruction produced by an elongated and contracted prepuce. For months he had chronic cystitis, and suffered much. A simple operation, with the removal of considerable smegma, has corrected most of the troubles above referred to.

The other case was of the same age. I recognized the condition some time ago by his frequent calls, and some nervous symptoms threatening *chorea*, all attributable to the reflex irritation of a constricted prepuce *that could not be retracted*. My neglect was sharply reproved by his having retention and a preputial inflammation producing spasms. The next day Drs. Forman and Green excised the prepuce at my request, and the conversion of a pin-hole aperture into an uncovered gland gave him that prompt relief he would have had long ago if he had not been my own child.

S. H. Hunt, M.D.

Long Branch, N. J., January 31, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 5, 1882, to February 11, 1882.

Woodhull, A. A., Major and Surgeon. The leave of absence granted him in S. O. 227, and A. G. O., 1881, is extended one month and ten days. S. O. 27, A. G. O., February 3, 1882.

Tremaine, W. S., Capt. and Asst. Surgeon, who reported at these headquarters January 9, 1882, per par. 12, S. O. C. S., A. G. O., will await further orders in New York City from date of his so reporting. S. O. 20, Department of the East, February 7, 1882.

Comegys, E. T., Capt. and Asst. Surgeon. To be relieved from temporary duty at Columbus Barracks, Ohio, on receipt of order, and to report in person to Commanding General, Department of the Missouri, for assignment to duty. S. O. 32, A. G. O., February 9, 1882.

Wood, M. W., Capt. and Asst. Surgeon. The seven days leave granted him on 4th instant, by Post Commander, Fort Brady, Mich., is extended twenty-three days. S. O. 19, Department of the East, February 6, 1882.

How We Sometimes Get Paid for Our Services. —Enter your grocer's on some balmy morning, when all nature seems responsive to the joyous heart of man, and say to him: "My dear sir, I feel deeply grateful for your kindness during the past month. All the vegetables with which you have favored me have been of the choicest quality, and duly appreciated. Although I cannot repay you in ready money, yet I shall always remember you with the deepest gratitude." What would be that grocer's reply? Yet this is the coin which many, who can afford to do better, expect the physician not only to receive as legal tender, but even with a thankful heart.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 11, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Feb. 4, 1882.	0	6	325	4	215	121	36	0
Feb. 11, 1882.	9	9	305	5	198	116	49	0

The St. Joseph College of Physicians and Surgeons.—We copied recently a widely circulated item, to the effect that the Illinois State Board of Health had refused to acknowledge diplomas from the College of Physicians and Surgeons of St. Joseph, Mo. We are informed that, instead of St. Joseph, it is the College of Physicians and Surgeons of Josslyn, Mo., which is not recognized.

Another Elephant Born in Captivity. — The second baby-elephant ever born in this country was dropped at Stamford, Conn., by one of Barnum's elephants, last week. The animal was thirty inches high and weighed one hundred and forty-five pounds. The trunk was only seven and one-half inches long.

A Sanitary Convention, under the auspices of the State Board of Health, will be held on February 28th and March 1st, at Ann Harbor, Mich. Manufacturers of, and dealers in, all kinds of sanitary apparatus or appliances are invited to send specimens of their articles for exhibition at the convention, and certificates of merit will be awarded to such articles as are deemed worthy.

Congressman Smith has introduced a bill providing that the National Board of Health shall furnish vaccine virus free of charge. The object of the bill is to prevent a "corner" in vaccine virus.—*Chicago Medical Review.*

Women Medical Students.—It is reported that lady medical students in Paris, France, are to be allowed to compete for house surgeonships, a privilege hitherto denied them.

Caring for Contagious Diseases in Brooklyn. —"To-day a stranger, if taken with a contagious disease, must *die on the street or break the law:* it is unlawful for him to take a public conveyance, and every hospital in the city is obliged by law to close its doors against him." So says *The Pathologist* for January. Is it not about time that this state of things should come to an end? If the public authorities continue to neglect the crying need that exists for an infectious disease hospital, will not some liberal-minded private citizen of wealth take it to heart and win for himself an undying name in this community? To-day, I may be a gentleman, and to-morrow a pariah, if I shall have been taken with a fever, in the eye of the law and the charities. —*Proceedings of Medical Society of Kings County.*

Meeting of the New York Medico-Legal Society.—The regular monthly meeting was held February 1, 1882. The first business of the society

was a report of a committee appointed to consider a protest, filed at the previous meeting, against the validity of the election of the President, Clark Bell, Esq., and of two trustees. This committee reported that the election was a valid one. A series of "whereases" ending in resolutions declaring the election void was then read by Mr. M. F. Eller. These resolutions were tabled and the original report of the committee accepted. The addresses of the retiring President, Dr. C. S. Wood, and of the President-elect, occupied the rest of the session. Mr. Bell, in the course of his address, proposed among other things that each member should give one bound volume annually, or its equivalent, to the library; that an appeal, on behalf of the library, should be issued to members of the Bar and physicians generally, and that the aid of the press be invoked to give publicity to the memorial. He also recommended that the publication of the *Bulletin* be discontinued, and to issue the papers read before the society in a New York medical journal. Mr. Bell discussed the modifications of the law of coroners, advocated by the society's committee on that subject, and referred to the Guiteau trial as an illustration of the extreme necessity, not only that expert testimony should be more carefully managed, but also that a closer preliminary inquiry should be made after a crime has been committed. A thorough medical inquisition as to Guiteau's sanity instituted immediately after the shooting of President Garfield would, in his opinion, have averted the spectacle that the trial has in some respects presented.

Murder of an Asylum Superintendent.—Dr. E. A. Adams, Assistant Medical Superintendent of the Michigan Asylum for the Insane, at Kalamazoo, was fatally stabbed by a patient in one of the wards while making his daily rounds, January 6th. The patient was hitherto supposed to be harmless. The stabbing was done with a large pocket-knife which was recently lost by one of the attendants.

Pain and Nausea Produced by a Wish-bone.—Dr. H. D. Ingraham, of Buffalo, sends the following: "Mrs. L——, healthy, began to have pain in the bowels about 4 P.M. It increased in intensity, was sharp and piercing, and accompanied with slight nausea when she retired at about 10 P.M. The pain continued through the night, prevented the patient from sleeping, finally became located in the rectum, and made her think that she was suffering from hemorrhoids, although she had never been afflicted with that disease. The nausea continued, but did not increase in severity. About seven o'clock the next morning she discovered, while applying vaseline to the anus, that something unnatural protruded, and, on removing it, found that it was the wish-bone (furcula) of a small fowl. Immediately upon its removal the pain and nausea subsided. The patient then remembered that while at a party in the evening before, she first felt the pain. She ate, among other things, quail. She had no recollection, however, of any unusual sensation while swallowing, or other symptoms which would indicate that she had taken a bone of that size into her stomach; yet it seemed altogether probable that it was swallowed at that time."

Iowa State Medical Society.—The Thirteenth Annual Session of the Iowa State Medical Association convened in Des Moines, Iowa, January 25th and 26th, the President, Dr. T. J. Caldwell, in the chair. Some nine or ten papers were read in full, and a number more by title. Forty-one new members were admitted, making the total number in the association over four hundred. The meeting this year was markedly better in every way than that of a year ago.

M. Charcot has been appointed to the newly created chair of Clinical Professor of Diseases of the Nervous System in the Faculty of Medicine, Paris.

A New Hospital Down-Town.—The trustees of the New York Hospital propose to erect a new hospital down-town in place of the present one in Chambers Street. This latter is insufficient for the demands now put upon it.

Dr. G. R. Metcalf, of Syracuse, N. Y., has resigned the chair of Materia Medica, Therapeutics, and Clinical Medicine at the College of Medicine, Syracuse University, and has removed to New York to assume the sanitary directorship of the Hudson tunnel, now in process of construction between New York and Jersey City.

Where is There an Epidemic of Diphtheria?—Drs. H. C. Wood and Formad desire to know of the existence of an epidemic of malignant diphtheria, in order that they may continue their research upon the nature of the diphtheritic poison. Dr. Formad will go to any locality within eight hundred miles of Philadelphia. Letters may be directed to the University of Pennsylvania.

The Medical Annals, of Albany, with its usual enterprise, issued daily editions of the proceedings of the late meeting of the Medical Society of the State of New York.

Death of Dr. Theodore L. Mason.—Dr. Theodore Lewis Mason died at his residence, in Brooklyn, of pneumonia, last week. Dr. Mason was born in 1803. He graduated in medicine at the College of Physicians and Surgeons, of this city, in 1825. He was prominent in the erection of the Brooklyn Hospital, and of the Long Island College. He had, however, shown especial interest in the subject of inebriety as a disease, and was President of the Inebriate Home of Kings County, and later was President of the American Association for the Cure of Inebriates. He was a resident Fellow of the New York Academy of Medicine, a member of the Medical Society of the County of Kings, and was president in 1842 and 1843. He was a permanent member of the American Medical Association and of the Medical Society of the State of New York. He was one of the founders, life member, and director of the Long Island Historical Society, a member of the American Colonization Society, and its vice-president in 1874.

Simple Continued Fever.—℞. Acid. hydrobrom., ʒ j.; Syr. simplicis, ʒ ij.; Aq. ad. ℥ j. M. Sig.—Every hour.—*Fothergill.*

Dr. Fothergill, in speaking of the above formula, says it will probably constitute *par excellence* the fever mixture of the future. It is especially indicated where there is cerebral disturbance.

Cystitis.—℞. Acidi benzoici, Sodii biboratis, āā gr. x.; Inf. buchu, ℥ ij. This amount three or four times a day.—*A. J. C. Skene, M.D.*

This may almost be called specific in its influence in the earlier stages of cystitis, affording rapid and lasting relief. The diet should be carefully regulated, and the skin and bowels kept in active condition.

Original Lectures.

ACUTE CIRCUMSCRIBED INFLAMMATION OF THE MEATUS AUDITORIUS EXTERNUS.

A Lecture delivered at the Manhattan Eye and Ear Hospital, New York.

By OREN D. POMEROY, M.D.

(Phonographically reported for the Record.)

Gentlemen: Circumscribed acute inflammation of the external meatus, as the name implies, is an acute inflammation resembling in most of its characteristics the ordinary furuncle, or boil. The locality of this is usually in the outer portion of the meatus. Authorities differ widely as to whether it is located in the anterior, posterior, inferior, or superior portion. The truth seems to be that the furuncles are scattered about promiscuously in the outer portion of the meatus. They seem to occupy the site of a hair-follicle or sebaceous gland. They may be quite superficial, being simply subcutaneous. In that case they are not nearly as painful or serious in their nature as the other varieties. Again, we have them in the subcutaneous connective tissue. In that case the condition is one of simple cellulitis; but the most serious of all are located beneath the periosteum, if situated far enough in to be opposite the osseous portion of the meatus; if a little farther out, they will be beneath the perichondrium. In that case they are not so amenable to treatment, and are exquisitely painful. This variety, however, is extremely rare.

The symptoms are as follows: the meatus appears completely closed, so it is with difficulty you detect anything but the closure of the meatus, accompanied, of course, by more or less pain. But, in the majority of instances, if you examine carefully, you will find that there is a little tumor or nodular swelling, one or more, located somewhere in the outer portion of the canal. If you touch these swellings with a probe, you will elicit a great deal of tenderness and pain, thus localizing the seat and nature of the affection with great exactness. If the attack is severe, we have systemic disturbances, and there will be considerable fever. The whole side of the head may be painful. Dragging upon the auricle will elicit pain. If the patient performs the act of deglutition, there will be pain. If the canal is swollen so as to be closed, there will be deafness from mechanical obstruction; otherwise, little deafness accompanies this affection. Unless of the severer varieties, after one, two, or three days the furuncle will burst. The rule is that the rupture is an extremely small one and the discharge of pus moderate in quantity, and, as to consistency, quite thick.

In reading the text-books, you will find a great deal about the *core* of the boil. You know this is nothing more than a mass of connective tissue which has been separated by the destructive process from its surroundings, and is in a more or less decomposed state. I rarely have seen anything in the auditory canal corresponding to this description My experience is that the furuncle contains thick pus, sometimes almost of a cheesy-like consistency, considerably thicker than cream. As I have said, in spontaneous rupture the opening will be extremely small, and it will be necessary to squeeze out the contents of the boil to get relief; this will need to be done frequently. Again, if this condition of things goes on, and the case is neglected, the inflammation may extend to the whole of the canal, producing a diffuse inflammation. The site of the rupture may be filled with granulations, which may reach the size of a true polypus after a time. If the boil is located deep in the canal, we are very likely to have inflammation of the tympanic cavity. Then, very naturally, we will have considerable lowering of the hearing, and some change in the quality of the inflammation. The discharge that comes from the boil smears the part and acts as an irritant. It also macerates the epidermis of the lining of the canal, and soon, if the patient is not attended to, he will have true otitis externa diffusa; what I mean is that he will have an external otorrhœa coming from the walls of the canal. Tinnitus aurium sometimes accompanies this disease, although, as a rule, it is absent.

The diagnosis of this affection will sometimes give us a little trouble. In a decided case of acute inflammation of the tympanum, the canal of the ear will be swollen, so that it is impossible by inspection to make out anything very exact, and in those cases it will sometimes give you much trouble to differentiate between the furuncular disease and the tympanic. If you cleanse carefully with a bit of cotton on a probe, and then touch the canal along its whole course and do not elicit tenderness, and in a given case you do have a good deal of deafness and tinnitus aurium, you are quite sure you are dealing with a case of tympanic disease, and not furuncular. On the other hand, if, after you have cleansed the canal, the hearing is materially improved, and by feeling here and there with the probe you detect spots of exquisite sensibility, you are quite sure you have a case of furuncular trouble. More than that, the suspected swelling in furuncular disease naturally will be of a red color, though it may not always be so. The apex of the furuncle may be a little softened, and possibly a trifling discharge may have taken place upon the surface, so as to prevent the red color from displaying itself. But, if you touch the canal with the probe at various parts and find soft spots, the diagnosis of pus is almost certain. If you take two probes and imitate with them the movements of two fingers in detecting fluctuation elsewhere, you may be able to detect it here. Sometimes we have an ostotic tumor of the meatus. It may sometimes be red and tender, but if you touch it with a probe you will find it of bony hardness. I remember some time since seeing a case where there was a dispute as to whether a given swelling, which gave rise to considerable pain, was furuncular or not. My opinion was asked. I confess I was somewhat troubled in arriving at a definite conclusion. The swelling was circumscribed and tender, and it seemed to be a furuncle; but when I touched it with a probe, it was found absolutely solid. There being doubt thrown on the diagnosis, the tumor was punctured, when there was no uncertainty about the nature of the swelling. Again, if you are dealing with an exostosis, you are likely to frequently find it in both ears.

The cause of furuncular disease is somewhat obscure. There are hardly two authors who agree as to what gives rise to this affection. Certain points, however, are reasonably well settled. The injudicious application of strong solutions of nitrate of silver to the external meatus is sometimes sufficient to pro-

duce a furuncle. Mild ear-washes are said to have produced it, but I am doubtful whether this is possible. The general effect of cold upon the ear may give rise to furuncle. But I do not put this down as amounting to very much. The strumous diathesis is certainly a predisposing cause of this affection. Painful dentition in children is sometimes asserted to be a cause. Wounds or injuries to the meatus externus are sufficient to produce furuncle. I certainly have known patients to cause severe local inflammation of the meatus externus by attempting to cleanse their own ears, by using a stick or some other instrument with or without cotton wound upon it. It is astonishing what trifling violence the meatus can endure. Another cause, which I believe to be more important than most of those already enumerated, is a generally depressed condition of the vital energies—the same cause which gives rise to furuncles elsewhere. I think the larger number of furuncles I have seen and treated have occurred in warm weather. At this season of the year we have depressing influences brought to bear upon the patient; and secondly, I have thought that the excessive perspiration of the part, possibly being suddenly checked, may give rise to the affection by obstruction to the glands. Again, I have seen so large a number of cases at a given time of the year, that it seemed to me almost epidemic. This was also in summer.

The treatment requires as much nice judgment and skill as any affection of the ear. The treatment of a furuncle before pus has formed is sometimes a little discouraging, and is quite difficult to accomplish successfully. We do not succeed with our remedies here as we do with acute diseases of the tympanum. A leech will sometimes do considerable good; again, it seems to do little or nothing. It should be applied at the border of the external meatus, somewhere within the cavity of the concha, and not on any account outside of the auricle. I make this point positive, for so many aural surgeons scatter leeches promiscuously about the auricle when leeching the ear. If applied some little distance from the meatus, it does almost no good whatever. If there are no indications to the contrary, the leech should be applied to the posterior face of the tragus; but, if you find swelling on the back side of the canal, put the leech on as near to the swelling as possible. You may use one, two, or three leeches.

A good plan is to follow one leech up with another, if sufficient alleviation of pain does not result from the first or second. In applying a leech, do it with great carefulness. If you hurt the patient by harsh manipulation, you will set his ear throbbing again, and make it worse than before. I am sometimes compelled, in sheer desperation, to apply leeches myself, for the reason that professional leechers in this city not infrequently inflict so much violence as to make patients worse; or, in applying styptics for the arrest of the hemorrhage following the leech-bite, they will make too much pressure, or in some way hurt the patient, so as to more than counterbalance the good done by the application of the leeches. After leeching, we think of warm applications. They may be moist or dry. The first may be applied by means of a douche, such as that of Clark or Thudichum. The water should be allowed to run gently, not violently, upon the parts for ten or fifteen minutes at a time. It should not be continued too long, but, as soon as a little relief is experienced, stop for a while. We will avoid, by all means, any prolonged soaking or macerating of the parts, because this softens the epidermis, and may give rise to an otorrhœa. Hot poultices of flaxseed meal may be used, but they must not be continued long, for the reason just given. A roasted onion, with the heart taken out, and pushed by its pointed extremity gently into the canal, is often quite serviceable. A rubber bag filled with hot water is a very convenient mode of applying dry warmth. Here you have this added factor: your capacity for making the temperature of the water exactly that degree which feels most comfortable to the patient, which at all times is indicated. This is an extremely important point, for if it is too hot it will be painful; if it is too cold it will also be painful. There is a middle point which, by experience, you will readily reach. A bag containing heated salt is a very good method of applying dry warmth. Painting the furuncle with nitrate of silver, if of the subcutaneous or superficial variety, will sometimes discuss it; it will frequently relieve *pain* in an admirable manner. The solution should be very strong; it may be saturated. You should be extremely careful not to apply the solution on adjacent parts. Tincture of iodine may be used in the same manner. It has the disadvantage of being sometimes quite painful. The objection to nitrate of silver is that it leaves a black incrustation, which will act as an irritating foreign body. Will you incise these furuncles before there is any evidence of the formation of pus? I have done it many times. It is a fearfully painful operation to incise one of these furuncles before any matter has formed—much more so than afterward. It is true that you will cause a certain amount of hemorrhage, which *may* give some relief. It is, frequently, also true that you add to the patient's sufferings very much, the throbbing and pain of the part after incision being much worse than before. You know the old practice of incising carbuncles or furuncles before the matter is formed, and which sometimes aggravated the cases very much. It really seems to me that the operation is at least heroic. I am not in favor of incising furuncles of the auditory canal before the formation of pus. I have done it too many times to be in favor of the operation.

At this juncture you may be under the necessity of administering a sufficient amount of morphine to relieve the pain. I do not like to do this unless other measures have failed, although opium is an antiphlogistic to these acute affections of the ear. As soon as you have determined by the rules already laid down that there is pus, even though it be not more than a single drop, I would recommend you to incise the furuncle. I would do it as follows: introduce a speculum and, after exposing the part to view with a forehead-mirror, carefully cleanse the part. I would feel of the tumor with the probe, finding, if possible, the soft part of it; then take a Graefe's cataract knife (which you know is one of the most exquisite of all knives), poise it carefully in your hand, and penetrate the tumor with a sudden and delicate thrust. You may not produce an opening a line in diameter, but it will be sufficient. Do not put your patient against a solid wall, for he may jump toward the instrument and do himself harm. Be sure and grasp the knife gently, so that if it meets with any special obstruction, it will slip in the grasp and not inflict violence. You will frequently find that no pus escapes from the opening, even when it is pressed upon. When this is the case, I take a small-sized probe and thrust it gently into the opening made by the puncture, and move it about so as to allow the pus to escape more readily.

It may then be squeezed out by pressing upon it with a probe. I object very much to large incisions here for more reasons than I feel like giving you at present. This evacuating of the pus should be done at first twice a day, if necessary. If the patient's ear begins to throb after a few hours, you can infer that the opening has closed and the matter is collecting and causing pressure, which gives rise to the pain. The indications will be then to introduce a small-sized probe into the opening and evacuate the matter again. This should be done as frequently as it becomes necessary. The relief from puncture is most signal and gratifying. You will frequently, after the disease has been relieved by this method, have a discharge from the ear, which may proceed from the whole of the canal. The epidermis will become detached, and the drum-membrane itself may have a sodden appearance. The discharge may last for some little time. Then the general treatment of otorrhœa of the meatus externus may be practised. Astringent washes may be used: acetate of lead, two to five grains to the ounce of water, poured into the ear a couple of times a day after syringing; the sulphate of zinc, two grains to the ounce, used in the same manner; even nitrate of silver in weak solutions, two grains to the ounce, may be used, although this stains the part unless you rinse it with salt and water afterward; but this renders it somewhat objectionable.

Better than that mode, however, is, after syringing the ear carefully, introduce your cotton wound on a probe and wipe off every particle of discharge, which is often thickened and adheres to the canal. In wiping this off, you will also remove a good many detached epidermic scales, which prevent your wash from coming directly in contact with the diseased parts. Then, if you dip the cotton on the end of the probe into the solution and wipe the whole of the canal, you will accomplish much more than to pour the wash into the ear. I wish I could teach you the value of nice manipulations in cleansing the ear with cotton-wool. It is worth a great deal to the patient. In these cases I have invariably found that the simple wiping of the canal in this way affords much relief, even from pain, for by this means we get rid of the discharges and detached epidermic scales, which act as foreign substances and produce irritation. If the furuncle is considerably swollen and the canal narrowed, you may think that it will be impossible to proceed in the way I have just recommended; but when you come to consider that the smallest amount of cotton can be wound upon a probe, you will at once see that it is possible to wipe out the canal in any case, no matter how great the swelling may be. Frequently you will find that the site of the furuncle remains as an open ulceration, from which granulations sometimes spring, and which may grow to the size of true aural polypi. It will interest you as microscopists to find that these are identical with the polyps which come from the tympanum; only, instead of being covered with epithelium, they are really covered with a fine and delicate epidermis similar to that of the skin of the part, yet the physical characteristics of each are the same. This point has been rather carefully studied up. The treatment is simply to remove them and cauterize their bases, like any other polypi. For this purpose I use the forceps, and, generally, nitrate of silver will be found sufficient for cauterizing purposes. If you feel like using fuming nitric acid, you should take the smallest possible amount of cotton on the end of a probe, dip it in the acid, wipe away all excess on paper, and touch only the polyp base. The adjacent parts will tolerate being touched with nitrate of silver, but not with nitric acid. Besides this, the canal may be left in a state of more or less subacute or chronic inflammation, which will require treatment appropriate to this condition. The remedy I have the most faith in is the tincture of iodine. It should be used with the following precaution: it is a painful remedy. In the ear it will not only produce a great deal of burning, but may cause deep-seated throbbing, extending quite to the middle ear, and perhaps to the throat. To apply the iodine properly, when you have dipped the cotton in the solution, you should wipe off most of it upon a piece of blotting-paper, or any other appropriate substance, then touch the part slightly and observe the effect. It is desirable to produce a little heat and burning; but, if a throbbing pain results, it has been used too freely, and, in that case, the ear may be syringed with tepid water, which will give relief. I would advise that an ear which has been the seat of furuncle should be protected from the cold. A loose piece of cotton may be thrust into the canal and worn constantly. If there is a discharge, the cotton may be removed several times a day, so as to keep it always dry. As to the constitutional treatment, you all know how to proceed. You will think of quinine as almost a specific in the prophylaxis and cure of this affection. Where there is a liability to recurrence of the furuncles, we feel helpless to relieve the patient by local treatment alone. We want to prevent their recurrence. The exhibition of quinine, in my opinion, does more good than any other one drug; but, if the patient has been worked hard, he should take recreation. If he has not been sufficiently fed, he should be supplied with an abundance of nourishing food. If he has been confined in-doors, he should go out, but should always be well protected from cold. Everything should be done to elevate his general condition, which will act as a prophylaxis to future trouble and facilitate recovery from the present attack.

Locomotives and their Influence on Malaria.—Dr. William S. King, Surgeon U. S. Army, has written us a letter in which he claims that the arrival and departure of locomotives, with their attendant trains, in the vicinity of our towns and cities, may account for the non-occurrence of malarial effects in localities where all the necessary conditions for their development seem to be furnished. While selecting a place of residence for his family, his attention was called to West Philadelphia, that portion of it adjacent to the Schuylkill River. On inquiry he ascertained that, notwithstanding the nearness of the low-lands, the residents enjoyed immunity from malarial affections. The theory he advances in support of the fact is as follows: the heated locomotives, by continually passing through the infected districts, rarefy the air, and create a constant atmospheric disturbance by inducing warm upward currents, such currents acting, with the pure air which rushes in from all directions, as agents in the dispersion or annihilation of the miasmatic influence. As this is the first allusion made to the effect of such agencies on malaria, it is one which justly claims attention, in order that the theory given above may be verified or disproved according as the testimony of those who are favorably situated, proves to be in favor of or adverse to it.

Original Communications.

CASE OF VARICOSE ANEURISM—ONE OF THE SINUSES OF VALSALVA COMMUNICATING WITH THE CAVITY OF THE RIGHT VENTRICLE.

By H. G. BEYER, M.D., M.R.C.S.,

PASSED ASSISTANT-SURGEON U. S. NAVY.

G. G——, a seaman in the United States Navy, aged thirty-three, and a native of the city of New York, was admitted to the Brooklyn Naval Hospital on December 24, 1881, at 5 P.M., in a comatose condition. At this time nothing could be ascertained about his illness.

It was impossible to obtain any information regarding his family history. According to the records of this hospital, he had an attack of adenitis, and was treated here for the same between the months of January and April, 1879. Dr. Ames, the surgeon of his last ship, informs me that, on August 11, 1880, he was admitted to the sick-list with traumatic orchitis, caused by a blow received from a handspike, and was ill for twenty days; that he was next admitted November 7, 1880, with acute rheumatism, affecting his left knee only; it yielded readily to treatment with salicylic acid, and was considered a light attack, patient not being sick enough to be confined to his hammock. September last, while in New York, on leave of absence, he suffered from an inflammation of his eyes, and was treated by an oculist there; it is presumed he also had a syphilitic history, dating from his early career in the service, but his record *physically* on board his ship had been excellent.

In this account no mention is made of the existence of heart disease, nor of anything that might lead one to suspect it, with, perhaps, the exception of his rheumatism. December last, while again on leave of absence, and living in a downtown boarding-house in New York, he was taken with violent vomiting, and sent for Dr Simon J. Walsh, whom he informed of the fact that he had been on a "spree" in Boston lately, and that his sickness was probably the effect of that. Dr. Walsh made a careful examination of his chest and abdomen, and diagnosed mitral disease of the heart, with gastro-enteritis; for the latter affection, as he kindly informed me, he ordered bismuth. His friends at the boarding-house also mention that on December 20th, the day preceding his sickness, while out walking with a friend, he was suddenly overcome by a fainting-spell, and would have fallen, had he not been supported by the person accompanying him; he was only partially unconscious, rallied quickly, and walked home. On December 23d, the day before his transfer to the hospital, Dr. Walsh found him sitting up, and, upon being told that he was "all right now," did not deem it necessary to continue his calls.

From all that could be learned, I found that G—— had been in the habit of going out daily, and had always been bright and cheerful until December 20th, the day of the fainting spell. On December 24th he lapsed into the unconscious state, during which he was brought to this hospital by Dr. Rufus Tryon, U.S.N.

On his admission, and while under the care of Dr. Charles A. Siegfried, U.S.N., G—— presented the following symptoms and physical signs, viz.: General surface livid, cheeks flushed; unconscious, but could be partially aroused; there was no paralysis, moved his head and extremities when pricked; pupils were evenly dilated; temperature, 97° F.; pulse at wrist was absent the greater part of the time, when present, scarcely perceptible; heart-beat only at long intervals, making one or two very tumultuous revolutions; loud murmurs with both sounds of the heart were plainly audible; breathing was frequent and noisy; was unable to swallow anything, and medicines were administered with great difficulty. A few ounces of urine were taken from him with a catheter, and found one-fourth albuminous, and very dark colored, from admixture of red blood-corpuscles.

The treatment consisted in external heat applied in the shape of hot blankets and internal stimulants.

Disease of the heart was clearly diagnosed, and the existence of aneurism strongly suspected. G—— expired at 8 P.M., about three hours after his admission, never having spoken nor been roused from his unconscious state. The next morning, at the request of Dr. Siegfried, I made the autopsy.

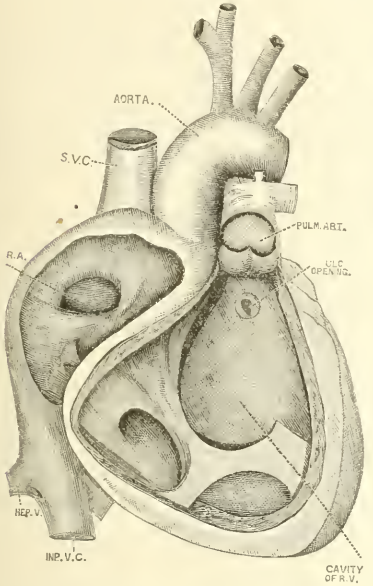
Autopsy was made fourteen hours after death. Rigor mortis well marked; body well nourished and exhibiting signs of good muscular development; surface, with the exception of two small scars upon buttocks and sacrum, presented nothing abnormal; skull-cap normal.

Brain.—Membranes opaque and covered with recent lymph at base as well as over the vertex, and here and there the arachnoid was found adherent to the pia mater. The substance was intensely injected and blood was flowing freely from the puncta vasculosa on cutting open the brain; the ventricles contained but a slight amount of fluid; a clot was found in the superior longitudinal sinus; weight, fifty-six ounces.

Diaphragm.—On right side at upper border of sixth rib, on left side in fifth intercostal space; but few ounces of dark-colored fluid in abdominal cavity and a lesser amount in right pleural cavity.

Heart.—Pericardium contained three and one-half ounces of a serous straw-colored fluid; heart flabby and but imperfectly contracted; valves sufficient; right auricle of a dark, purplish color, and firmly contracted; muscular substance of a pale reddish brown color; the endocardium smooth and glistening but opaque, and a very copious deposit of recent lymph was found in the cavity of the right auricle. About one inch below the posterior segment of the semilunar valves of the pulmonary artery, a well-defined and perfectly round ulcerative opening, of about three-eighths of an inch in diameter, and showing recent granulations, presented itself to view. This opening was very nearly in the centre of a little thin-walled pouch, projecting from the posterior wall of the right ventricle into its cavity. A probe passed into this opening, and pushed slightly backward, upward, and to the right, was seen to emerge above the right anterior segment of the semilunar valves of the aorta. On farther examination it was found that the right anterior sinus of Valsalva was very much dilated, and formed a pocket, the size of a walnut, which contained a fibrinous clot. The little finger passed into this pocket could almost directly be pushed on into the right ventricle, through the ulcerated opening above mentioned. On further examining the left anterior sinus of Valsalva, it was also found dilated; this

pocket, somewhat smaller than the preceding, led to a little space between aorta and pulmonary artery, and was closed only by a layer of semi-transparent pericardium, which prevented it from communicating directly with the cavity of the pericardium, and would probably have been ruptured within a very short time had the patient continued to live.



Lungs.—Extensive old adhesions, costal, and diaphragmatic on left side, and hemorrhagic infarction of entire lower lobe, the rest was highly œdematous and congested; right side free, except slight recent adhesions over upper lobe with intense general congestion and œdema.

Spleen.—Congested and but slightly enlarged, weighing eight ounces.

Kidneys.—Left, eight ounces; right, six ounces; capsule easily detached; both were congested and fatty.

Intestines.—Stomach, large and small intestine deeply injected and filled uniformly with a coffee-colored, semi-solid, gelatinous mass, and covered throughout with masses of recent lymph. The large intestine, which was removed to within an inch of the anus was, at certain places, firmly contracted to the extent of from one to eight inches, there being no stricture. From the sigmoid flexure down to the sphincter, it was uniformly contracted, the lumen hardly admitting my little finger.

Liver.—Weight, four pounds and four ounces; was of a very dark brown color and congested, and of a granular outside appearance; apparently cirrhotic; gall-bladder filled with bile, and normal.

Microscopical examination was made both from fresh material, mounted in a one-per cent. solution of chloride of sodium, and from hardened tissues stained with picro-carmine and mounted in glycerine.

Heart.—Muscular fibrillæ show here and there foci of fatty degeneration; there is a very thick layer of subpericardial and subendocardial adipose tissue, extending into the muscular substance of the organ, surrounding the blood-vessels, and also, to a certain extent, the muscular fibrillæ; connective tissue seems slightly proliferated; blood-vessels show a distinct thickening of the adventitia, also media to a moderate extent, with a corresponding puckering of the intima; in some places they appear irregularly compressed, being surrounded by large clear spaces, evidently indicating serous effusion. Near some of the largest arterioles, I notice a newly formed tissue, rich in nuclei, and the cells composing it are partly round, partly spindle-shaped; this tissue does not seem to surround the calibre of the vessels completely, and although adjacent to, and apparently continuous with the adventitia, can hardly be called part of the latter.

Aorta.—Nothing abnormal was observed in the coats of the aorta.

Kidneys.—Capillaries and veins choked with blood-corpuscles; connective tissue moderately proliferated; renal epithelium fattily degenerated.

Liver.—Blood-vessels crowded with blood-corpuscles; connective tissue increased considerably, the resulting cirrhosis being of the multilobular variety of Dreschfeld, or the cirrhose vulgaire of Charcot, described by Hanot; the corpuscular elements of the liver show granular and fatty degeneration, also a good deal of pigment.

Remarks.—Varicose or communicating aneurism was first defined by Stokes as that variety of the disease in which blood passes from one portion of the vascular system to another. In accordance with this definition the present example may, I believe, be safely described under that head.

I have been able to find but two examples of varicose aneurism that bear a real resemblance to the one in hand. Hope, quoted by Hayden, in 1839, published a remarkable case of aneurism of the aorta immediately above the valves, communicating with the right ventricle by two apertures; the symptoms and signs which followed a strain in lifting a weight, and a "creak in the heart," accompanied by faintness, were lividity, œdema, jerking pulse, purring tremor, double murmur, and a continuous rumble to the left of the sternum from the second to the fourth rib.

The second case came under the notice of Dr. Hayden himself through his friend, Dr. Stokes, and is described in full on page 759 of the second volume of Dr. Hayden's work on "Diseases of the Heart and Aorta." This aneurism was of the size of a tennis-ball, arising from one of the aortic sinuses, and communicating with the right ventricle by an aperture of the size and shape of a "shirt-button-hole." The symptoms were general congestion and œdema; physical signs, frémissement, with a loud and double murmur at midsternum; the case being under observation for some time, the diagnosis of aneurism, opening into one of the ventricles, was presumptively made.

The latter instance, to which my attention was very kindly called by Dr. G. L. Peabody, only differs from my own in this, that it was somewhat larger, only one of the aortic sinuses was involved, and the aperture by which the aorta communicated with the right ventricle, was of the shape of a "shirt-button-hole." In my case, the sac was smaller, two

of the aortic sinuses were involved (although no communication existed between them), and the opening was perfectly round, and its margin beset with recent granulations, indicating ulceration.

Cases of varicose aneurism having a more remote relation to the present one have been reported at various times and in different countries by Beauchene, Wells, Curling, Munro, Reid, Thurnam, Peacock, Rokitansky, McDowel, and others.

The present example of varicose aneurism, then, derives its interest and importance mainly from the rarity of the pathological specimen which it has furnished us in the shape of the heart. It has been forwarded to the Surgeon-General, Philip S. Wales, U. S. Navy, who will probably place it in one of the museums at Washington, D. C.

As to the causes of the disease in the present instance, it is reasonable to suppose, that rheumatism, syphilis, and the free use of alcoholic stimulants, may have more or less predisposed to the trouble, while the exciting cause was doubtless an injury. The sudden violent physical exertions incident to his position of gunner's mate on board of a man-of-war warrant this conclusion.

With regard to the symptoms which G—— presented during life, the fainting-spells which he experienced while out walking, the day before the diagnosis of heart disease was made, possibly marks the time of occurrence of perforation of the aneurismal sac. The fact that the perforation of the aneurismal sac was of recent date finds also partial support in the character of the granulations covering the margin of the aperture.

Cause of death.—Paralysis of right heart from over-distention, and the great general disturbance in the nutrition of all the internal organs and viscera consequent thereon.

HEART-LESIONS IN RHEUMATIC FEVER.

By W. S. CHEESMAN, M.D.,

AUBURN, N. Y.

Though systematic writers are careful to declare that, in rheumatic fever, pericarditis and endocarditis are as truly local manifestations of the general disease as are the joint-lesions, yet it is their custom to treat of them as complications, along with pleurisy, pneumonia, and peritonitis. Thus the notion has gained currency that these heart-lesions are accidents, and to be prevented by special local or general medication. In view of the practical as well as theoretical consequences of this error, it seems important to emphasize the idea that heart diseases are not mere complications of rheumatic fever, like ophthalmia in cerebro-spinal meningitis, or hypostatic pulmonary congestion in typhoid fever, but are local expressions of the disease process quite as characteristic, if not so common, as arthritis.

It may be worth while to inquire upon what facts this conception is based. In the first place, upon the *frequency* with which acute rheumatic arthritis is attended by heart disease. Especially is this noticeable in the young. Said Watson: "With perhaps one exception, I never knew the disease (rheumatism) to occur in unequivocal form before puberty, without its being attended with inflammation of the lining or investing membrane of the heart." Since his day all observers have testified to similar purpose, if not in so sweeping generalization. In adults, also, rheumatic heart disease is sufficiently common, though its frequency is variously estimated, different writers claiming its occurrence in from seventeen to fifty-five per cent. of the cases. Surely, when any lesion is so usual a concomitant of a disease it rises above the rank of an accidental complication to the importance of a characteristic local manifestation.

And this is still more plainly suggested by the frequently coincident appearance of heart and joint lesions, and especially by those cases wherein the heart affection *precedes* the joint trouble, or in which it is the only local evidence of the rheumatic disease. That such instances do occur is admitted pretty generally. I have myself reported a case of rheumatism of the pericardium which existed two weeks before any joint affection occurred to stamp its character, and which promptly yielded to the salicylate of soda (see Medical Record, November 27, 1880). I can now give notes of two analogous cases.

Case I.—I was called to see a boy, aged sixteen, who complained only of headache and malaise. Examination of the chest was negative. Temperature 101 F., and not reducible by quinine. On the third day I made out a mitral systolic murmur, had the patient put to bed, and carefully examined his heart twice a day. The temperature remained elevated, and the physical signs of heart disease became more and more intense. The interpretation of the case as one of rheumatism of the endocardium alone did not occur to me until, after a week's illness, the right knee became swollen and painful. Then I recognized the condition, and salicylate of soda promptly reduced the temperature and stopped the arthritis. The patient recovered with a damaged heart, which, when last examined, was undergoing compensatory hypertrophy.

Case II.—Twenty-four hours after being caught in a shower while rowing, a gentleman observed a slight creaking sound as he was sitting quietly reading. For some time he gave it no attention, but, on finally seeking its source, he noticed that it was synchronous with his own pulse, and, in short, proceeded from his own chest. It was loudest when he leaned forward. No pain nor any other symptom was observed. The next day, in addition to hearing, he could distinctly feel an intra-thoracic friction. He was examined by a distinguished New York diagnostician, who clearly heard, at a distance of four feet from the patient's chest, a sound which resembled the crunching of snow under foot on a cold winter day. It was loudest when he leaned forward, but was to be heard and felt at all other times. The diagnosis was of pericarditis without effusion, and the patient was ordered to bed, and to take ten grains of sodic salicylate every four hours. Some palpitation was felt that evening, but recovery was rapid, and on the fifth day the friction was felt for the last time, during forced expiration, with the arms above the head.

I refrain from comment on this interesting case, save to urge the point that here apparently was a rheumatism of the pericardium uncomplicated by arthritis, a view concurred in by the well-known medical gentleman who saw the case.

In consideration of these facts, probably none would be inclined to dispute the position clearly enunciated by Flint, that while it may be "convenient to speak of these affections as complications, they are, properly speaking, to be reckoned among the local manifestations of the disease; that is, they are dependent on the same internal deter-

mining cause to which the affection of the joints is to be referred."

I am not aware, however, that any one is willing to accept the logical consequence of this position, viz., that *so long as the rheumatic process continues*, it were as idle to think of preventing its manifesting itself in the endocardium or pericardium, as to seek to protect any particular individual joint from its attack. If the general disease may find local expression in inflammation of any or all of these parts, there might reasonably seem quite as much hope of preserving whole by topical or other measures the right wrist (let us say) as of thus keeping the heart sound. Arthritis, and not seldom cardiac diseases occur with pyæmia: who would pretend to protect the heart while pyæmia survives? In like manner, the vaunting of any treatment as able to shield the heart, while it does not destroy the rheumatic poison which attacks the heart, seems unphilosophical. First antidote that poison, and then, and not before, should the lining and enveloping membranes of the heart, as well as the other serous structures, be thought safe.

These *à priori* considerations are, it must be confessed, not contradicted by facts. As might have been expected, in spite of all the means used to prevent them, heart diseases occur in rheumatic fever with about the same frequency as when Gull and Sutton investigated the matter by the exhibition of mint water, and were led to urge the expectant treatment of rheumatism. It has been the boast of every new plan of therapeusis that it met this crying need, yet neither belladonna plasters to the precordium, nor blistering, nor saturation with the alkalies, nor any other measure, enjoys the confidence of the profession. If the recent debate of the London Medical Society proved nothing else, I believe it proved abundantly that we have no means for averting the cardiac manifestations of acute rheumatism, just as we have none for averting any single arthritic manifestation—*except by stopping the rheumatism*. Herein would seem to lie the only rational hope: to check the disease before the heart can become affected. It must be remembered that cardiac trouble, when it occurs at all, begins usually in the first week of the disease; hence, if we are to prevent it, treatment must be instituted at the outset, and the disease aborted as speedily as possible. When it is considered that patients seldom apply to hospitals in the first week of their sickness, we can understand why the salicylates, which certainly are our most prompt anti-rheumatic agents, are not shown by hospital statistics to be very much more efficient in keeping the heart structures whole than are the older forms of treatment.

If this reasoning be well founded, it were not too much to expect that we should hear no more of those various plans of local or general treatment which medical literature urges for the special protection of the cardiac structures in rheumatic fever; and it would seem the plain duty of the profession, laying aside such hopes as vain and unwarrantable, to address itself to the all-important task of checking, at the earliest possible stage, the general disease whereof lesions of the heart and of the joints are alike the local manifestations.

Professor Hayem, of Paris, has been transferred from the Chair of Therapeutics to that of Pathological Anatomy, vacant by the nomination of Charcot to the new Chair of Nervous Diseases.

ALCOHOL AS AN ANÆSTHETIC.

By J. T. SEARCY, A.M., M.D.,

TUSKALOOSA, ALA.

What constitutes the physiological action of alcohol in the body is always a question full of interest and of practical importance. The study of the mode of its action is interesting to the physician in his administration of it as a medicine. He is also interested in it as an agent that brings to his door as many, if not more patients than any other one cause. The world at large, considering the immense interests at stake, are continually demanding of sanitary medicine information as to its actual value as a beverage—for which object it is mostly used—until it is, in fact, one of the "livest" questions of the day.

It is very evident to one reviewing the subject, that professional opinion has been "changing base" decidedly, even within the past ten or fifteen years. From time immemorial it has been customary to set down alcohol as a "*stimulant*" in the strictest sense of the term. Now we find many of the best men of the profession declaring that it is not a *stimulant* in any of the stages of its action. We find it now fighting tenaciously for its own claims as a *nutrient*, though it is very evident it is driven very strongly to the wall to prove them, and there are many ready to deny that it is in any sense a food.

I do not propose to go into the argument to prove its stimulating or its nourishing value, but briefly call attention to its present status as an anæsthetic.

In the first place, alcohol is born in the same retort, and has physical properties and a chemical composition so similar to a large number of agents of modern discovery, whose effects in the system are called anæsthetic and nothing else, that naturally we would assign it to that family, and probably this would be more readily and rapidly done if the cautious conservatism of medicine did not always move slowly. More than any other profession it is "addicted to swear in the words of a master."

Ethylic alcohol is the form most frequently met with and used. It occurs in all the popular drinks of the day, in very variable proportions, ranging all the way from two or three to fifty per cent. We may, in a practical point of view, regard them all as mixtures of alcohol and water, associated with other substances of minor importance.

Compared with the anæsthetics in most frequent use—as chloroform, chloral, ether, nitrous oxide, and the like—alcohol seems to differ from them not so much in the salient points of its action as in its tardiness and slowness. Each one is of course peculiar to itself in minor points, but their leading features are very similar. Alcohol is slower in its action than chloral, which is slower than ether, and ether than chloroform, and chloroform than nitrous oxide. This tardiness of action renders alcohol the least dangerous; and, although called alcohol by the Arabs because of its *subtilty*, it is really the least subtile of them all. It seems, though, to have been very subtle in assuming titles and attributes that have served to cover up its true character. Because of its tardiness of action, its different stages are more open to inspection, and make it an excellent "prototype" by which to study anæsthetics.

The recent number of Wood's Library, on "Anæsthetics," by Professor Lyman, is a most excellent work, taking up the whole subject, and the following reflections have been most profitably informed, supported, and encouraged by its perusal.

Before we consider the anæsthetic action of alcohol, a condensed review of some of our physiology is relative to the subject.

Tissue-change, whether you call it cell-action, molecular motion, or what not, constitutes the essential for life. To support and continue this action harmoniously, "naturally," is the direct and the indirect object of the greater part of the machinery of the body. The magnitude of these processes, silently, and in health harmoniously going on, we are very apt to overlook or forget. Action—cellular, molecular, tissue action—constant, continuous, and harmonious, in accordance with natural processes, constitutes healthy life. And we might be bold enough to say that disturbed natural action, whether it go so far as to produce destructive changes visible to the eye or not, makes or constitutes disease.

The blood carries the pabulum to support these natural processes, and is the vehicle to remove the waste products. The most important organ in the body is the nervous system—the cerebro-spinal, sympathetic, vaso-motor, and all are a whole indissolubly interwoven and bound together. Control is its principal function. It controls and regulates not only the supply of blood to the tissues, but even regulates, to a greater or less extent, cellular action itself. The cerebrum, with its hemispheres, its gray and white matter, is the head-centre, its cortical portion principally cellular, and its white matter principally composed of nerve-fibres. Lying on the plate before you, it appears to be a very homogeneous mass, when in truth it is the most complex of all complexities. Its cortical portion, principally cellular, "having functions past finding out," is the meeting ground between mind and matter. Every cell appears to be connected with every other cell by the nerve-fibres in the whiter portion, and also through them and their connections unites all nervous structures into one, and makes the body a whole. So intricate, complex, and multiplied are the parts that "with how much art the windings run and where the regular confusion ends" is a most perplexing question in physiology. And the multiplied complex character continues even outside the cranium in the rest of the nervous system, descending in order of importance. The whole body is united into a complete whole by the nervous system, which exerts its control over all. Its several portions differ in cellular structure and in molecular motion according to function.

We have some agents, none more decidedly than the anæsthetics, that make exhibition of their properties by influencing the nervous centres. The study of the action of such drugs is particularly interesting, and the explanation of it does not appear to be nowadays *all* theory. The order and the degree in which certain portions of the nervous system are affected, is beautifully explained by the paralyzing influence of such drugs over their cellular motion, more here and less there, as the natural motions of particular parts are more or less interfered with by the different agents used.

On the lowest forms of living existence—simple protoplasm—alcohol produces instant death, unless largely diluted. Apparently it does so by its affinity for water. It will become "hydratia" if it has to take the water from living sources. Colloidal albuminous substances, not living, are coagulated by it in the same way. If largely diluted to at least twenty per cent. in the watery solution, it does not destroy structure, but arrests, either permanently or for a time, the natural molecular motion. It produces paralysis. The stronger the solution the more decided and rapid the effect, and *vice versa*. The antiseptic property of alcohol when applied to wounds, and, in the arts, its property to arrest fermentation, are due to this. It renders dormant, if it does not entirely destroy, the germs whose "catalytic" presence makes the fermentation in the one case, and does injury to reparative action in the exposed tissues in the other. The antiseptic properties of alcohol were known before the days of the good Samaritan, and are still highly endorsed by many surgeons, though carbolic acid and other substances supplant it for many reasons.

Taken into the stomach the same "hydrating" affinity of alcohol shows itself at once, if the stronger mixtures are taken. Hence, when this is the case, we find the mucous coat "shrivelled," "corrugated," and "hardened." It may go, if not sufficiently diluted, not only so far as to produce mucous catarrh in that organ, but also injure the deeper tissues; and gastritis in all its phases we see following its use. Because of the same property many explain its hurtful effects upon the liver, which it reaches immediately after leaving the stomach, and through which it is sifted by the innumerable capillaries of the portal vein. Also the blood-corpuscles change shape, and the fibrin is sometimes seen coagulated for the same reason.

Entering the circulation, one of the first apparent effects of alcohol on the nervous system is its paralysis of vaso-motor control. It reaches in the capillaries that portion first, though its transit through the body is so rapid that it reaches the higher centres almost as soon, and we see them exhibiting disturbed action. The result of vaso-motor paralysis is to dilate the capillaries, hence there is increased flow of blood to the periphery, and the heart takes on increased action to supply the demand. The increased vascular supply of blood to the surface or to the capillaries seems to produce an increased degree of temperature, particularly of the external parts, the deeper ones not changing. It is just here that the *stimulating* properties of alcohol come in, if it have any, but ether or chloroform can put in the same sort of a claim, though the stages of their action are much shorter. If there is in the first flush of blood-supply increased general tissue-change and there is some increased warmth, the specific paralyzing effect soon follows and the general temperature is lowered.

The higher nervous centres show disturbance according to function. In the brain, mental aberration exhibits itself, excited action, and not a complete balance of mental control, is shown. The higher mental powers seem to topple first. Reason and self-control lose their hold on man in proportion to the amount of the drug taken, and he, in a certain sense, is left to the impulses of his lower instincts. We have every degree of loss of mental control, ranging all the way from a slightly hilarious, talkative, silly, or stupid condition, to complete loss of all consciousness. As might be expected, good normal brain power, representing force of mental tone and control, peculiar to and different in different individuals, will give varying exhibitions in the loss of such control. The drinking man is noted for all sorts of departures from his normal condition of mental balance, and weaker peculiarities of mind are shown in greater prominence when they exist. Descending in the order of importance in the nervous system, the centres of special sense, of general sensation and of motion and of the various "vegeta-

tive" functions, show the paralyzing influence of the drug. Motion and sensation will go through progressing stages of paralysis. The sympathetic systems controlling respiration and circulation and general tissue change are slowest to yield. All the anæsthetics seem to follow this order. Paralysis to produce complete loss of consciousness and destroy all sensation is harder to produce with alcohol than the others.

In the administration of all anæsthetics there is a stage of pleasurable feeling; when we reach a certain lack of sensation it seems to be peculiarly grateful. Many drugs have this *pleasant stage* in their action, a stage of general good feeling, besides those usually called anæsthetics, as opium, hyoscyamus, hashish, and tobacco, the list is a long one. I mention those most often used. To obtain this stage in the paralyzing action of these medicines, the whole world has been led into many "bad habits." Men like the "good feelings" thus produced, and will use the agents regardless of the consequences. The use of such agents is naturally cumulative. A frequent disturbance of the nerve-centres of sensation, as well as the general cellular action in the body, begets, of course, a more or less constant feeling of pain or discomfort, and the user of such anodynes or anæsthetics has to repeat his doses. Many of the neurotic troubles frequent in the uses of such drugs can be attributed to such sources, and as long as the maxim holds good, "like father, like child," we will have in our midst the neurotic troubles, notably increasing in our day and generation, that we are charitably inclined to attribute to other causes, but which we cannot ascribe to a better one than that the use of such drugs extensively in the past two hundred years has done much to produce them.

It is the anæsthetic action of alcohol, as explained above, and not any "stimulating" or "nutrient" properties attached to it, that makes it sought after and used in the popular drinks of the day. And much might be done for sanitary medicine, if we would call it by its proper name, and insist that its toxic, paralyzing influence so largely overshadows the others that they are of minor consideration, even when admitted at all.

Early Indications of Phthisis.—Dr. William Porter, of St. Louis, sends us an article on "Early Indications in Phthisis," in which he does not state anything new, but rather enforces the necessity of early recognizing the initial lesions of the disease, and of using proper means for their relief or cure. He states that since phthisis has been more thoroughly understood, its average duration has increased. Hueter found among 16,000 autopsies, 780 cases of healed tuberculosis, showing quite a large percentage of recoveries. This brings to mind the theory of "self-limitation of the disease," as supported by Professor Flint. The remaining salient points in his paper relative to treatment, are as follows: 1. Thorough protection of the body from injurious atmospheric or telluric influences. 2. Correction of a faulty condition of the digestive organs, for the purpose of securing a proper assimilation of nutritious food. 3. Early removal of the patient to a climate which will tend to invigorate the physical forces. It is certainly true that these rules, when strictly observed, are productive of greater benefit to the patient than hyper-medication.

HOMŒOPATHY.*

By A. T. SPEER, M.D.,
NEWARK, OHIO.

The subject that I have chosen for my paper to day is one that has occupied my thoughts for a long time, and to it I ask your earnest attention.

I am not unmindful of the position in which it may place me, nor of the bitter feelings that may be engendered thereby; but having in mind the one object that should be the aim of the physician, viz., the curing of disease, I announce my subject, the homœopathic doctrine of *similia similibus curantur*. I will not weary you by mentioning the numerous theories that have from time to time been advanced to explain the actions of medicines upon the system, each one being accepted for a time by a greater or less number of the profession as a satisfactory explanation, only to be superseded by some later theory, until to-day we are almost as ignorant of the action of medicine upon disease as we were one hundred years ago. In 1797 Hahnemann announced the principle which has made him famous. Although it has been received with derision by a vast majority of the medical world, it has steadily progressed in favor, overcoming obstacle after obstacle, until to-day the system of medicine founded upon it numbers among its patrons and steadfast friends a large proportion of the more intelligent and cultured people of each community. It is recognized in some of our universities. Our State Boards of Health are in part composed of homœopathists. Some of our State institutions are controlled by them, and in a late number of The Medical Record it is announced that the Binghamton Asylum for the Insane has been placed under the medical charge of a homœopathist. This is the second asylum for the insane in the State of New York under homœopathic control. Consultation with homœopathists has been advocated by such men as Jonathan Hutchinson and John Tyer Bristow. With such facts staring us in the face, it becomes our duty, as honest practitioners of the healing art, to investigate, calmly and thoroughly, the claims of homœopathy, and if we find that it teaches the use of any remedies which, used according to this system, are more successful in the cure of disease than those remedies we have been taught to prescribe, we are bound by honor, duty, to say nothing of self-interest, to use them. The subject is too vast to be considered in a single paper. I shall, therefore, select two medicinal substances, viz., aconite and mercury, and shall try to prove, by our own standard authorities, that when we are successful in treating diseases with them, it is in accordance with the homœopathic doctrine, and although all sorts of explanations are advanced as to their *modus operandi*, the plain simple fact is, that Hahnemann gave the symptoms and treatment years ago that Professors Bartholow and Ringer now emphasize.

Are we better qualified to-day, so far as having a definite knowledge why we use certain drugs, in curing disease than we were fifty years ago?

Will any gentleman present explain to me why he uses mercury in any disease? Have we really made any progress in the practice of medicine except what has been forced upon us by those whom we regard as irregular practitioners?

These are serious questions and should command

* Read before the Licking County Medical Society, by A. T. Speer, M.D., President, January 3, 1882.

our earnest attention. But I have digressed, and will now resume my subject. First, aconite. It is only within the last few years that this drug has been used to any extent by the regular profession. Ringer says, "Therapeutics," 6th edition: "Perhaps no drug is more valuable than aconite." I will ask your attention to a few of the many uses which he gives for this remedy. He says, "the power of aconite to control inflammation and subdue the accompanying fever is remarkable. It will sometimes cut short an inflammation. Though it will not remove the products of inflammation, yet by controlling inflammation, aconite will prevent their formation, so saving the tissues from further injury. The results of aconite are most apparent when the inflammation is not extensive, or not very severe, as in the catarrh of children, in tonsillitis, or in acute sore throat. In these comparatively mild diseases, especially if the aconite is given at the earliest stage, when the chill is still on the patient, the dry, hot, and burning skin becomes in a few hours comfortably moist, and then in a little while is bathed in profuse perspiration. With the sweating comes speedy relief from many of the distressing sensations—as restlessness, chilliness, heat and dryness of the skin, aching pains and stiffness; the quickened pulse simultaneously becomes far less frequent, and in a period varying from twenty-four to forty-eight hours, both pulse and temperature reach their natural state. If caught at the commencement, a quinsy or sore throat rarely fails to succumb in twenty-four or forty-eight hours. If administered early enough, the beneficial effects of the drug soon become strikingly apparent. Thus large, livid, red, glazed, and dry tonsils, will, in twenty-four hours, present the aspect indicative of the subsidence of the acute stage of the inflammation, the disappearance of the swelling with much redness, whilst the membrane becomes moist and bathed with mucous or pus. Its effects on catarrhal croup, or, as it is sometimes called, spasmodic laryngitis, are just as conspicuous. It removes the urgent dyspnœa in a few hours, and shortly afterward subdues the fever, and almost extinguishes, in a few hours, an attack lasting usually three or four days. Aconite is equally serviceable in severe colds, with much chilliness, great aching of the limbs, a hot dry skin, and quick pulse. To those who may not have tried it, these visible effects on inflamed tonsils, etc., may seem exaggerations, but any one who will employ the aconite in the way we are about to point out, can verify my statements. In pneumonia, pleurisy, and the graver inflammations, the effects of this valuable drug, though not so rapid, are often manifest in pericarditis accompanied with violent throbbing and extreme pain. Aconite will speedily quiet the undue action, and so relieve the pain."

He says: "The method of employing the drug has much to do with its efficacy. It should be given without delay at the very onset of the disease, every hour being important. Half a drop or a drop of the tincture in a teaspoonful of water should be given every ten minutes or quarter of an hour for two hours, and afterward hourly, but if there is much prostration, with feeble and weak pulse, a still smaller dose."

After mentioning a number of acute affections over which aconite exerts a marked influence, he says: "Aconite proves useless in certain epidemics of febrile inflammatory sore throat. These cases are met with chiefly during the prevalence of scarlet fever. The throat is much swollen, of a very dusky red color, and the pulse is very frequent and very weak. There is great prostration, and the symptoms are of a marked typhoid character. Here stimulants, with the application of a strong solution of nitrate of silver, do most good."

If Dr. Ringer had investigated this condition more carefully, he would have found that belladonna produces just as remarkable results in this as aconite in the other variety of sore throat.

Professor Bartholow says: "The monopoly by homœopathic practitioners of the use of aconite has aroused a prejudice against it which has discouraged its employment. Aconite is, however, an antagonist to the fever process. It is not applicable in accordance with the so-called law of similars. It is used by these quacks because it is a powerful agent, which will produce manifest effects in small doses that may easily be disguised." He advises its use in the same class of cases as Ringer, and in the same doses, only at longer intervals. Dr. Bartholow recognizes the condition of inflammation when the parts are a dusky red, and circulation languid, and there advises belladonna.

According to homœopathic authorities, "the grand sphere for aconite is found in all diseases that emanate from, or have their starting-point in, the cerebro-spinal nervous system, and are of a congestive, inflammatory, or rheumatic character, with full, bounding pulse, much heat, dry, burning skin, agonized tossing about, violent thirst, red face, shortness of breath, and great nervous excitability." *Vide* Burt's "Characteristic Materia Medica," 1873, Art. Aconite.

"Mercury," Professor Bartholow says, "has a selective action on the lymphatic glandular system, and notably on the salivary glands and pancreas. Among the earlier symptoms of the action of mercury are an increase of the salivary secretion, an alteration of its quality, fetor of the breath, swollen tongue, swelling of the parotid, sublingual and submaxillary glands, etc." In the "Therapy" he says: "The acute glandular affections of the throat and neck, tonsillitis, parotitis, inflammation of the submaxillary and sublingual glands, are often speedily removed by mercurial preparations. One-twentieth of a grain of calomel, the one-fifth of a grain of mercury and chalk may be given every two hours" Now, how are we to know from the above description in what form of tonsillitis, parotitis, etc., to use the mercurials? The rule is a simple one: where you find the symptoms presented resembling those observed from the effects of mercury, you may be assured that the frequent administration of minute doses of mercury will be attended with the happiest results.

Ringer says: "Small doses of mercury yield excellent results in a form of diarrhœa common in children. The child's health is bad, the digestion is imperfect, generally with annoying flatulent distention, and three or four pale, clayey, pasty, stinking motions are passed in a day. A single grain of bichloride of mercury dissolved in half a pint of water, and a teaspoonful of this solution given each hour, or, still better, one-third of a gray powder every hour or two hours, will in one or two days limit the number of stools, and restore their natural bilious color, even though they have been clay-colored for weeks. The same weak bichloride of mercury solution of a single grain in ten ounces of water, in doses of a teaspoonful, is very efficient in another serious form of diarrhœa common in chil-

dren. The characteristics of this form are very slimy stools, especially if mixed with blood, and accompanied by pain and straining. The salient indication for employing the bichloride is the slimy character of the motions; sometimes the slime is described by the mother as 'lumps of flesh.' This affection may be acute or it may be chronic, and last for months; but in either case the bichloride cures with remarkable speed and certainty. A similar treatment relieves the dysentery, acute or chronic, of adults, provided the stools are slimy and bloody. One-hundredth of a grain of the bichloride, given hourly, or every two hours, according to the severity of the case, is generally sufficient, rarely failing to free the stools from blood and slime, although, in some cases a diarrhœa of a different character may continue for a short time longer, requiring, perhaps, other treatment to control it. One-sixth of a grain of gray powder given hourly is of great service in infantile cholera, characterized by incessant sickness, with profuse and almost continuous diarrhœa, very offensive and copious motions, watery, almost colorless, or of a dirty, muddy aspect. Under this treatment, the vomiting generally soon ceases, and the diarrhœa shortly afterward. Mercury, as we have seen, proves very serviceable in most forms of infantile diarrhœa, both acute and chronic. I have endeavored to point out categorically the circumstances when one mercurial preparation is preferable to another. It may be urged that as in both severe, acute, and chronic diarrhœa the same pathological conditions are found, that the same form of mercury suitable for one case would equally benefit another. But though the pathological state is held to be identical, still some hitherto undetected differences there must be, either in the nature of the disease itself or of the part it affects, for surely it requires a different pathological condition to produce in one case slimy stools, in another watery, and in another green, curdy stools. These differences displayed in the symptoms, though at present not discriminated pathologically, require somewhat different treatment. Hence, though in each kind of diarrhœa all forms of mercury are useful, it is found that in some cases bichloride of mercury is greatly to be preferred, and in other cases gray powder."

Now, gentlemen, after the statement of Professor Ringer, that in one form of diarrhœa bichloride of mercury acts more satisfactorily, and in another form gray powder, where shall we go to obtain some explanation or reason for this? Have we an author who will point it out to us? If we have, I have failed to find him. On the contrary, the more I studied the matter, the greater was my confusion, until I sought in homœopathic works for a solution, and then I found it clear and simple; and I may say that the indications for the use of the different mercurial preparations, as pointed out by the earlier homœopathic writers, are those by which they are now governed in practice. We adopt the treatment empirically, and are in a measure successful; but not recognizing the law by which it is administered, we use the remedy at a great disadvantage.

There are two things in homœopathy that at once antagonize the regular physician. The similia principle, and the size of the dose administered; and the feeling is so bitter, that scarcely a physician can be found who will make the least investigation of it. The principle of similia, etc., no matter how much we may deny it, is still the only one by which we can explain the action of many of our most potent remedies. Second, in administering drugs, we aim to give just enough to prove curative in the disease we are treating. No school of medicine, I believe, attempts to do more. Homœopathists claim that their method of preparing drugs is superior to ours, and that they can obtain the same results with much smaller doses. Dr. Marcy ("Homœopathic Theory and Practice of Medicine," page 119, 1850), writing on this subject, says: "The advantages which we obtain from a minute subdivision of crude substances are as follows:

"*First.*—We develop every part of the active principle pertaining to the substance by breaking up all natural organization or arrangement between its molecules, and thus exposing a large amount of *active* surface which would otherwise have remained latent.

"*Second.*—By distributing these molecules intimately throughout an inert vehicle (sugar or water), they are far more readily absorbed by the delicate lacteals and absorbents than coarse and irritating particles of matter.

"*Third.*—When these minute atoms have been conveyed by the blood to those parts with which they have an affinity, they penetrate the smallest vessels, impress the minutest sentient nerves, and become productive of results entirely unattainable by drugs in a crude form.

"*Fourth.*—During the act of subdivision, it is not improbable that the atoms of drugs sometimes become oxidized, and thus acquire new and increased powers.

"*Finally.*—We infer that no new properties are developed by the homœopathic method of preparing drugs, except such as arise from the mere subdivision of their particles, and that all ideas respecting *spiritualization*, *dynamization*, and *magnetism* in the preparation of medicines are erroneous and untenable. In regard to the repetition of doses, we are to be guided by the *acute* or *chronic* nature of the malady, the urgency and danger of the symptoms, and the effects produced by the medicine."

Dr. H. G. Piffard, Professor of Dermatology, University of New York, in his "Materia Medica and Therapeutics of the Skin" (article Mercury), says: "Since we have used the triturations, however, in preference to the ordinary pills, patient more rarely complains of disagreeable sensations. We have further been enabled to materially reduce the size of the dose in order to obtain the desired effect. In other words, a larger proportion of the drug is utilized for specific purposes, while but a small amount remains to give rise to *local irritation*." "I have nothing to add to this (he says), except that I continue to use triturations of mercury and other substances with increasing satisfaction."

Dr. Piffard began with the first and second decimal triturations; how much higher he goes he does not say.

These are all the drugs to which I shall allude in this paper. Of my own personal experience in the use of them I shall say nothing. My only wish is that we may investigate the subject carefully and wisely, and if we find that the principle of "similia similibus curantur," even to a limited extent, is correct, it is our duty at once to admit it. And if the administration of drugs in minute doses, in the form of dilutions and triturations, is more beneficial than when given in the usual form and way, we should at once acknowledge it; and not only that, we should make good use of them, so far as they may go, in treating those who may be placed in our care.

To alleviate the pain and distress of the sick in the easiest and pleasantest manner possible, ought to be the constant study of the physician, and the simple excuse for not investigating this subject, that so much prejudice has been aroused by it, is unworthy the dignity of the medical profession. In conclusion, I wish it distinctly understood that I am opposed to the recognition of homœopathy as practised by most of its advocates; but that there is good in it I am firmly convinced, and I again repeat that it is our duty as physicians to thoroughly investigate it, and if we find that it is to be preferred to the recognized mode of treatment, there is but one course left for us, and that is to assign it its proper place in the treatment of disease.

Progress of Medical Science.

Effects on the Heart of Occlusion of the Coronary Arteries.—The experiments which Von Bezold and, at a later date, Samuelson conducted on rabbits for the purpose of determining the consequences resulting from an arrest of the circulation in the nutrient vessels of the heart, showed that after ligation of the coronary artery the heart ceased to pulsate, the left ventricle coming to a standstill a few moments before the right, both ventricles, however, resuming their functions if the ligature were removed after the lapse of one or two minutes, and care taken to insure the circulation of blood through the previously occluded artery. In other respects the conclusions arrived at by the two investigators differed. With a view to reconciling these differences, Cohnheim and von Schulthess-Rechberg performed an analogous series of experiments on dogs, these animals offering particularly favorable objects for investigation, as their coronary arteries course superficially beneath the pericardium and can be isolated without any dissection worth mentioning. It must be remembered that both in dogs and rabbits, as well as in man, the individual branches of the coronary arteries are true terminal arteries, so that the ligation of any one of these branches shuts off the circulation entirely from some part of the heart, and thus artificially induces a condition identical with that which obtains in man in cases of sclerosis of the coronary arteries when the contraction of their calibre has progressed to such an extent that any particular part of the heart is thereby deprived of the quantity of blood requisite for the performance of its functions. The dogs experimented on were curarized and artificial respiration kept up, the heart's action being registered upon Hering's kymographion. The results noted were as follows: After ligation of a branch of a coronary artery an immediate effect was observed in no instance. Toward the end of the first minute, however, an occasional beat was dropped, then the action of the heart became markedly arhythmic and at the same time retarded, the arterial pressure meanwhile retaining its ordinary height until the irregular rhythm was well established, when the pressure sank slightly. After an average lapse of 105 seconds after tightening of the ligature the heart, which until then was contracting vigorously, suddenly ceased to pulsate, and the arterial pressure rapidly sank to zero. Both ventricles stopped beating at exactly the same instant in the condition of diastole, the auricles continuing to contract. From ten to twenty seconds later very active twitching movements manifested themselves in the muscular mass of the ventricles, and after persisting for forty to fifty seconds, ceased. Neither these twitchings nor the contractions of the auricles have any influence whatever upon the arterial pressure. Once brought to a standstill the ventricles cannot be made to resume their function by any means employed. In this respect, as also in the simultaneous arrest of both ventricles, Cohnheim's and von Schulthess-Rechberg's results differ very materially from those of von Bezold and Samuelson. Indeed, in the former's experiments, the arrest of pulsation remained permanent even when the ligature was removed during the period of arhythmia, before the blood-pressure sank to a marked degree. After discussing and negativing the various explanations offered as to the causation of the above phenomena, Cohnheim and von Schulthess-Rechberg conclude that the arrest of function is due to the accumulation of a directly toxic agent in the parts deprived of blood. They demonstrate that this is not carbonic acid gas, but decline to hazard any opinion as to its exact nature or composition. The same authors performed similar experiments on rabbits, and found that one-third of the cases followed the same typical course as was observed in dogs; in other cases the blood-pressure sank gradually, the heart's action also ceasing by degrees, and both ventricles not being arrested simultaneously. In the former cases the animals were strong and vigorous, having a high blood-pressure, while in the remaining cases the subjects were weak, etc. In other words, a vigorously acting heart succumbs more rapidly after occlusion of a coronary artery than does a debilitated or primarily weak organ. This explanation also serves to reconcile the differences noted in the experiments of the authors and those of previous investigators, the dog's heart being by far more powerful and resistant (widerstandsfähig) than that of the rabbit. At the close of their paper Cohnheim and von Schulthess-Rechberg claim that the results noted in their experiments may be applied directly to human pathology, and serve to explain many of those cases of sudden death which occur in apparently perfectly healthy and previously robust individuals, in which the only pathological post-mortem change discoverable is sclerosis of the coronary artery.—*Biologisches Centralblatt*, November 15, 1881.

Physiological Effects of Hyoscine.—Gnauck's experiments on healthy individuals with this drug (a product of the decomposition of hyoscyamine) show that it possesses many effects in common with atropine and hyoscyamine, but differs in one important particular. All three produce a sense of pressure in the head, dizziness, dryness of the throat, thirst, nausea, oppression, and diminished frequency of respiration, flushing of the face, dilatation of the pupils, staggering gait, delirium, etc. Both hyoscyamine and hyoscine also induce a sense of fatigue and sleep. But while hyoscyamine and atropine increase the frequency of the pulse, hyoscine always has a contrary effect, even in very large doses. Further, hyoscine manifests its action promptly and powerfully, but the effects do not last long. They vary very much in different individuals, and in the same individual at different times. Sometimes the minute dose of 0.0001 gramme produces alarming symptoms, while the minimal dose (*i.e.*, the least quantity required to produce any appreciable result) of hyoscyamia is ten times as great. At other times

0.0025 of the former are well borne. As regards the individual symptoms, the retardation of the pulse amounts to as much as 20 beats per minute, reaching its maximum in from ten to twenty minutes after the administration of the drug, and disappearing almost completely in about the same length of time. Dilatation of the pupils is a very frequent, but not an invariable symptom: it usually begins at the time that the pulse is regaining its normal frequency, and gradually increases; but not even large doses of hyoscine act as efficiently in this respect as do comparatively small doses of hyoscyamine. From five to ten minutes after the pulse has begun to return to its normal rate, a sense of fatigue appears and leads to a deep and quiet sleep, lasting from one to two hours. On the whole, Gnauck concludes that the action of hyoscine most resembles that of atropine. It is doubtful whether the former may be of use as a hypnotic in cases of insanity, for, although, it is undoubtedly efficient in this respect, the variations in individual sensitivity and the intensity of the numerous secondary effects in small doses are so great as to render inadmissible the employment of sufficiently large doses.—*Allgemeine medical Centralzeitung*, November 12 and 16, 1881.

The Digestion and Absorption of Fat in the Human Body.—Mr. Critchett Bartlett has made a series of interesting experiments on the animal digestion of fats and oils, and reports the following conclusions as the results of his investigations:

The formation of even the most perfect emulsion of fat or oil with water does not of itself render any portion of them soluble in water, nor do they take up any of the latter except mechanically, to become, so to term it, hydrated.

The addition of alkalies to fixed oils or fats at common temperatures, whether the alkalies are as hydrates or salts, does not affect such transformation.

Mixtures of fixed oils or fats with water and the solids of the pancreatic fluid, when kept for long periods, promote the separation of the fatty acids from the glycerine. This decomposition is, however, effected by the disgusting butyric fermentation, which is set up in the presence of putrefying nitrogenous matters supplied by crude pancreatin, and is never found in a healthy state.

Saponification is not the only natural solution of fatty matters in water at the temperature of the body.

Fatty matters are found in the pancreatic fluid and in the pancreas, in a free state; in solution with water (hydrated); and are also slightly saponized in the intestine. These or some of these different forms of fat are distinguishable, in combinations of various proportions, in the intestine, the pancreatic gland, the thoracic duct, and while the fat or oil is passing through the walls of the absorbents.—*Epitome of Laboratory Notes*. London, 1877.

A Successful Case of Intra-Arterial Transfusion of an Alkaline Solution of Chloride of Sodium.—Bischoff reports the following case. The patient, a woman of thirty-one, primipara, was delivered with forceps on October 8th, of a dead child weighing 3,450 grammes. The bag had already ruptured, forty-one hours previously, the abdomen having been very sensitive for several days. This sensitiveness continued to increase after the evacuation of the fetid waters. On October 7th, toward evening, the temperature had risen to 38.1° C., the pulse being 100. On the morning of October 8th, a chill occurred, with a temperature of 40° C., the latter falling shortly before delivery, at five P.M., to 38.7° C. The birth of the child was followed by considerable hemorrhage, and fifteen minutes later the placenta, firmly adherent to the right side of the fundus uteri, was extracted manually, during which procedure an additional quantity of blood, weighing 1,490 grammes, was lost. The uterus now contracted firmly and no more blood escaped, but the patient was in a state of extreme collapse, the pulse being at times not perceptible, at others 156 in the minute; respiration, 42; extremities cold, etc. Postural treatment with the head low, stimulants, etc., had no effect. The left radial artery was then exposed, incised, and the central end ligatured; a hard-rubber canula was now passed into the peripheral end of the artery, and through this, by means of a glass funnel and a tube of india-rubber (previously immersed in dilute carbolic acid), 1,250 grammes of a six-tenths per cent. solution of common salt, to which a couple of drops of liquor potassæ had been added, were injected in the course of just one hour. During the transfusion the patient rallied considerably, the pulse gradually falling to 122, and the restlessness passing off completely. Excepting a transient and slight attack of perimetritis and incipient mastitis, patient recovered without a bad symptom. Bischoff calls attention to the fact that no sign of oppression, etc., such as usually occur during and after transfusion of blood was observed in this case. Of course the operation is not indicated in acute anæmia with impaired function of the hæmatogenic organs, such as the spleen and marrow. The quantity employed should be at least 500 grammes, and the solution should be rendered alkaline, as pointed out by Schwartz, Worm-Müller, and Goltz, preferably by the addition of the hydrated oxide of sodium, which was not used in the case above cited simply because it was not at hand. The reason why an artery is to be selected in preference to a vein is because the subcutaneous veins are found with great difficulty in cases of extreme acute anæmia.—*Correspondenz blatt fuer Schweizer Aerzte*, December 1, 1881.

An Epidemic of Erysipelas and Diphtheria.—According to Dr. J. G. Meachem, of Racine, Wis., the Northwest has lately been visited by more or less severe epidemics of diphtheria and erysipelas, which have been connected with one another in a singular manner. For a period of six months Racine was the point selected for this strange visitation—one disease following or preceding the other in attacking the same family; sometimes both visiting different members at the same time. Of eight cases detailed, the following is one of the most remarkable: A gentleman, fifty years of age, was staying with his brother, when a violent fever, introduced by a chill, set in, and shortly afterward diphtheritic exudations were detected. On the fourth day erysipelas appeared upon the cheek and nose, extending finally over the whole hairy scalp. While convalescing, a niece showed evidence of diphtheria, and then the brother fell a victim to erysipelas, while the wife in her turn had diphtheria. Thus, in a family of four, there were three examples of diphtheria and two of erysipelas at or about the same time—one individual having first diphtheria and then erysipelas. The writer is inclined to believe that the two poisons are identical, but observes that in a practice of forty years he had never before seen this curious inter-relation of the affections.—*Transactions State Medical Society of Wisconsin*, 1881.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, February 25, 1882.

MEDICAL LEGISLATION.

THE results of the various attempts made, in this and other States, to regulate the practice of medicine, have not been very striking. Still it must be admitted that substantial progress has been made in the right direction. At least we are beginning to learn what can possibly be obtained, and, consequently, are not given so much as formerly to make impracticable demands. The public is being educated to the necessity of protecting itself against fraud and quackery, and is showing a willingness to listen to arguments to that end. The groundwork is a broad one, and must be carefully worked over before the ultimate results are obtainable. The encouragement to the medical profession to go on is, however, significant and substantial. The history of medical legislation in this State proves this, notwithstanding the oft-repeated assertion of some that all attempts at legislating in behalf of legitimate medicine are failures. The present law is by no means a perfect one, that is, so far as the practical enforcement of its provisions are concerned; but it is a great advance on anything heretofore attempted. Experience has shown its defects, and measures will be taken ere long to remedy them. The perjury clause will be made more comprehensive and more stringent, so that, in case the proposed bill passes, there will be little if any chance of escaping the penalties by an appeal to legal technicalities.

Thus much having been effected, the way will be prepared for other enactments looking toward proper qualifications for practice. Foremost among these will be compulsory State examinations for license. There is no doubting the fact that the profession is almost a unit on this point. Impartial examination is the only trustworthy guarantee for professional qualifications of any kind. Without wishing to cast any reflection upon the methods of faculty examinations, we must admit that they are open to grave abuses. The colleges should be nothing more than schools for teaching. Their charters empower them to grant diplomas, but the licensing power need not be coupled with this privilege. They can certainly be separated without casting any particular reflection upon the mere ability of a given faculty to judge of the qualifications of its candidates for graduation.

There is a law in this State providing for independent examinations by a board appointed by the regents of the university, but such examinations are not compulsory. It has been recommended by the Medical Society of the County of New York that an alteration in the present law be made to meet what appears now to be a necessity. There is hardly a doubt that, when the time comes, it will receive the endorsement of the majority of the profession of the State. The only possible opposition may come from the colleges; but the leading medical schools will hardly consider it good policy to object to reasonable tests of a high standard of acquirements. The greater the number of graduates that can pass a strictly impartial board, the better it must be for the reputation of the institution educating them. The graduates of the leading schools could certainly pass such a board, while mediocre colleges would either be spurred to greater diligence in training their students, or would drop out of the lists altogether. Such pruning would certainly do no harm, save to incompetent teachers. Once establish State examinations by boards appointed for the purpose, and we adopt one of the surest methods of suppressing quackery and illegal practices that is possibly obtainable. We are certainly working in that direction. Definite action on this point was delayed by the State Society, at its recent meeting, only for the simple reason that it was not quite prepared to do so. But the necessary action is quite certain to be taken at the next annual session, and with possibly little or no opposition on the part of the members.

We see no reason why medical graduates should not be subjected to the same tests as are graduates from our law schools. Formerly it was the practice to admit to the bar all who received their diplomas from the law faculties. Now, however, an extra and independent examination is demanded by a board of judges before a license can be obtained. The direct result of this has been the raising of the standard and the weeding out of incompetent practitioners. The result would be the same in the ranks of medicine, and no one would be legally qualified to practise his profession who was not thoroughly competent to do so, and the punishment of the unqualified man or the pretentious quack would be a comparatively easy matter. Such, after all, is the real end of all efforts to regulate the practice of medicine and protect the public against quackery.

THE NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.

We have received the thirteenth annual report of the above association, and learn from it that the past year has been one of unusual prosperity. The increase of membership is double that of the previous year, and the permanent fund has been increased to nearly nine thousand dollars. It is greatly desired that this amount be increased to ten thousand dollars, since not till then can the proceeds from it be utilized. The sum of five hundred dollars has already been offered by one gentleman, on condition that the remaining amount be made up by the trustees.

The work and objects of the Physicians' Aid Association have often been alluded to by us. Its aim is to afford pecuniary aid to the widows and children of its deceased members, by a regular system of assessments upon the living. It is a kind of mutual life insurance company upon a moderate scale, but conducted with the greatest economy, and not attended with the risks of the larger corporations. At present, on the death of a member, all the other members admitted under fifty years of age are assessed one dollar; all those admitted when above fifty years of age are assessed two dollars. In this way there was obtained and paid to the estates of deceased members last year the sum of $1,540. In some cases members can be helped also when they are sick. As soon as the permanent fund reaches ten thousand dollars, money can be used to help the widows and children of deceased members.

It is needless to say that the objects of the association are most praiseworthy, and that it has already done much good. As nothing succeeds like success, there is a particularly good prospect before the society, now that the permanent fund is so large, that it can soon be utilized. The officers of the society have worked faithfully and hard, and they well deserve the reward of success and appreciation likely to be tendered them.

QUACKS AND RELIGIOUS PEOPLE.

In a paper on the subject of "Quackery, Ancient and Modern," read by Mr. Nelson Hardy before one of the London branches of the British Medical Association, the following proposition, among others, was formulated: "Quackery most readily finds its victims among the highest and lowest social strata, not among the more intelligent middle classes; *readily also among religious people;* hence, certain quacks always advertise largely in the (so-called) religious periodicals."

Mr. Hardy refers in the above to the advertisements, not of quack nostrums, but of quacks themselves—persons who proclaim that they can cure "catarrh," or consumption, or cancer, or the various physical aberrations of "erring, but noble young men." The statement made that these persons advertise more, proportionately, in religious journals than in any other class, is, we fear, a correct one, both for this country and England.

If it is a fact, it is one that deserves attention from the clergy and the religious press. There is nothing criminal or wrong in a person's being imposed upon by quacks; and it may even be to one's credit that he does not live in an altidude of constant sharpness and suspicion. The mental altitude of the Christian, whether devout or otherwise, is, as a rule, one of confidence and faith toward religious teachers and writers, and all connected therewith. He would believe the professions of one who claimed to cure consumption, if made in his religious journal, when he would not if it were seen elsewhere. Ought the religious press to take advantage of this fact?

We commend to the Christian public Mr. Hardy's conclusion: that religious people are, through the agency of their periodicals, the most imposed upon of almost all classes.

THE FIRST RESECTION OF THE STOMACH FOR GASTRIC ULCER.

On November 21, 1881, Dr. Rydygier, of Kulm, performed the operation of partial resection of the stomach in a case of perforating gastric ulcer with dilatation. The fact that the patient has, up to the present time, been greatly benefited, gives some justification to this most radical and venturesome mode of treatment, and the operation, as thus applied, in a new class of disease, may, in a certain minor degree, be considered an epochal one. The patient was a married woman, thirty years of age. In 1878 the first symptoms of gastric trouble came on, but they were not severe until the beginning of 1880. She then commenced to have acid eructations and frequent vomiting. In February she vomited blood and had bloody stools. After that date the vomiting kept up in a very regular manner. The patient would, for a few days feel tolerably well, the abdomen would increase in size, then she would be feverish, and feel ill for two or three days; finally, the whole culminated in attacks of vomiting, in which the stomach emptied itself of eight or ten quarts of liquid and solid matters.

When the patient was examined, previous to the operation, the bodily organs were found to be healthy, with the exception of the stomach. Five litres of water were poured into this organ, and its boundaries well marked. The greater curvature reached to the symphysis, the lesser to a point just above the navel. The diagnosis was: ulcer of the pyloric end of the stomach, with consequent constriction of the pylorus and great dilatation of the rest of the organ.

The patient was prepared for the operation by daily washing out the stomach with salicylic acid water.

The details of the operation are given by Dr. Rydygier, with great minuteness, in the *Berliner klinische Wochenschrift*, where the case is reported.

The abdominal wall was divided in the linea alba for the distance of 10 ctm., the larger half of the incision being above the navel; the drawing out of the pylorus was then accomplished with no great difficulty. The separation and removal of the diseased part was, however, attended with much trouble and delay. The pylorus was immensely thickened, and firmly bound posteriorly to the pancreas, so that a portion of that organ had to be removed, as also some of the omentum. The whole pyloric sphincter, with the part of the posterior wall in which lay the ulcer, was removed. The piece measured anteriorly, 1.7 ctm.; posteriorly, 5 ctm. in length. It contained the pyloric orifice, whose lumen just admitted a No. 9 bougie. The ulcer was two-thirds of an inch deep, and nearly two inches long.

The stomach was united to the duodenum by thirty-two internal and twenty-nine external catgut ligatures. The lines of union were powdered with iodoform.

The progress of the patient after the operation was almost uninterruptedly favorable. There was a little vomiting for the first few days. Food was given by the rectum for the first four days, then soup was taken by the mouth; two days later there was a passage from the bowels. The temperature rose at times to 102° or 103°.

Six weeks after the operation there had been no return of the attacks of vomiting, the digestion was good, and the patient was reported to consider herself well.

Dr. Rydygier's operation must be considered a most brilliant feat of surgery, looked at from whatever point of view. There are, however, very few cases of gastric ulcer which present just the combination of pathological conditions which might indicate resection. The actual permanent benefit of the present operation has also yet to be determined. The regulating action of the pylorus is likely to be interfered with, and pyloric incontinence, as Ebstein has shown, is a condition which may excite many bad symptoms.

THE OPERATION FOR EXTIRPATION OF THE KIDNEYS.

In a paper read before the Göttingen Society of Medical Sciences, Dr. J. Rosenbach reviews the subject of extirpation of the kidney, and contributes a case of his own. Dr. Rosenbach naturally thinks that the operation is not performed as often as it should be. He finds in surgical literature the records of sixty-five cases. Before Simon's nephrectomy in 1869, there had been only two cases, one in 1861 and one in 1868. After Simon's case, the operation was performed two or three times every year until 1878.

The general introduction of antiseptic precautions at that time increased the number of cases. In 1878 there were five; in 1879, eight; in 1880, fifteen; and in 1881, nineteen nephrectomies reported.

The indications for the operation, as shown by the histories, are quite numerous. They are enumerated by Rosenbach as follows: 1, tumors; 2, wandering kidney when it causes serious disturbance; 3, cystic kidney; 4, urinary fistulæ; 5, calculi in the pelvis of one kidney; 6, painful affections of one kidney, not due to calculi; 7, pyelitis, or suppurative kidneys, with or without calculi; 8, tuberculosis of the kidney; 9, early injuries; 10, intimate union with abdominal tumors which have to be removed.

The mortality from the operation of nephrectomy is not so serious as might be supposed. In the 65 cases reported, 28 died and 37 recovered. The mortality, however, ought not to be considered apart from the conditions which led to the operation. Thus, out of the 13 cases in which kidneys were removed on account of tumors, 9 died and 4 got well. In the 9 operations for wandering kidney, 2 died and 7 recovered. In 9 extirpations of hydronephrotic and cystic kidneys, there were 3 deaths and 6 cures. In 17 cases of suppurative kidneys, with and without stones, there were 7 deaths and 10 cures.

The operation for the latter class of cases is the one most frequently performed, and so far it has had the best results. Dr. Rosenbach's case was one of this kind. The patient was a man forty-two years of age, who gave a history of perfect health until the renal trouble appeared. The diagnosis of a unilateral pyelitis, probably from calculus, was based upon the following facts: attacks of renal colic occurred upon the right side alone; the patient at times passed perfectly clear urine, which contained no casts and was of normal specific gravity; the right kidney was painful and tender, the left was not.

The operation, which was performed essentially according to Simon's method, was successful, and confirmed the diagnosis. The patient recovered, and, four months later, was doing well. The daily amount of urea and urine passed was, as is usually the case, about the same as normal.

THE TRANSFUSION OF SALINE SOLUTIONS IN CASES OF HEMORRHAGE.—Several years ago Goltz tried to show that in severe hemorrhages the cause of death was not so much the loss of red blood-corpuscles as the emptying the arteries of fluid, so that their cavities were incompletely filled. Dr. E. Schwartz, of Halle, acting upon this view, experimented with dogs, and found that when they were almost moribund from loss of blood the injection of alkaline saline solutions restored them, rapidly raised the blood-pressure and relieved the symptoms. The next thing is to try it on man.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 16, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE Librarian reported that there had been donated to the library, since the last stated meeting, 117 bound and 7 unbound volumes, 15 pamphlets, and 545 medical journals.

The President introduced Dr. Murray, U.S.A., and Dr. Richardson, of Rome, Ga., and invited them to seats upon the platform.

DR. A. A. SMITH then read a paper entitled

CLINICAL OBSERVATIONS ON DIABETES MELLITUS.

Within the last three years *four* cases of diabetes mellitus, under the observation of Dr. Barker and himself, gave very similar histories:

CASE I.—Mr. X——, sixty years of age, suffered from mental depression, disturbed sleep, inability to concentrate his thoughts upon his work, and had an unusual sense of muscular fatigue. He had lost flesh markedly, had considerable thirst without much perspiration. There had been no special increase in the quantity of urine, no increase of appetite—if anything it was less than usual. He came for treatment because of disturbances of digestion and mental depression. He was irritable and nervous, and constantly had a feeling that something terrible was about to occur. He was a good liver, had been accustomed to use wine more or less freely, especially of the sweet variety, and champagne. He had at times hepatic and gastric dyspepsia. He had not had any special mental strain, no injury, severe or sudden shock to the nervous system, had never had malaria, and was without hereditary tendency to disease. His urine had a specific gravity of 1034, contained a considerable quantity of sugar, no albumen, microscopical examination was negative, and the quantity passed in twenty-four hours was sixty-five ounces.

CASE II.—Mr. Y——, forty-nine years of age, a literary gentleman and hard student, came complaining of intense mental depression. He was naturally inclined to take a very serious view of everything. He had suffered from severe attacks of headache from childhood. He had already tried a process of dieting, and upon the use of farinaceous articles his symptoms had increased in severity. He had always been excessively fond of sweets. He had thirst, his skin was dry, and the quantity of urine was increased to from two hundred to two hundred and thirty ounces in twenty-four hours. He had marked muscular weakness, and had lost thirty-four pounds of flesh within four months. He had never had gout or rheumatism. The urine had a specific gravity of 1036, and contained sugar.

CASE III.—Mr. Z—— had substantially the same symptoms as presented in the above cases. He had had one distinct attack of gout; aside from that no severe illness, or accident, or severe shock to the nervous system. He was excessively fond of sweets. He had no hereditary tendency to any disease, and had no skin affection. His urine had a specific gravity of 1035, contained considerable sugar, and the quantity passed in twenty-four hours was eighty ounces.

THE TREATMENT.

The treatment adopted in all these cases consisted in the administration of *codeia* one-fourth of a grain t. i. d., gradually increased to *one* grain three times a day; the tincture of the chloride of iron, twenty drops t. i. d.; and a laxative pill consisting of aloes, nux vomica, and hyoscyamus. The patients were allowed to drink as much water as they desired. The diet was that ordinarily prescribed for diabetic patients and such as can be found in the different books upon the subject.

These patients came under observation at nearly the same time and were subjected to the same plan of treatment, and in each there was a marked improvement manifested promptly, and at the end of four months sugar had entirely disappeared from the urine, the specific gravity was respectively 1022, 1020, and 1018, and the patients expressed themselves as feeling entirely well. The treatment was continued for three months longer, and the iron was continued still further on account of the anæmia. More than a year had elapsed since sugar disappeared from the urine and it had not reappeared.

One point of interest was the fact that in these three cases the patients were hard-working men mentally, suffered from disturbances of digestion and mental depression, and led a sedentary life, with but little muscular exercise.

Their histories seemed to point to disturbances of the nervous system as connected with the causation of the diabetes.

All these patients were excessively fond of sweets, an important fact in connection with diet as a cause of the disease. If a mere coincidence, it was a singular one.

The order of events in these cases seemed to be: (1) continuous strain upon the nervous system; (2), disturbances of gastric and hepatic digestion, with excessive fondness for sweets; and (3), sugar in the urine.

The speaker then referred to the emaciation so uniformly present in diabetes, and asked, Is it not probable that, in those cases in which emaciation goes on rapidly, there is disease of the pancreas, either as cause or effect?

At this point reference was made to the case of the mother of a family, who had had unusual and excessive anxiety from domestic causes. Her urine had a specific gravity of 1034, contained sugar in abundance, and the quantity passed was 200 ounces in twenty-four hours. The treatment adopted was the same as that already reported, with the addition of five drops of the tincture of belladonna, because of the drowsiness produced by the codeia, and the omission of the iron. The urine rapidly diminished in quantity, as also did the sugar, and at the end of three weeks the specific gravity was 1,028, and the patient felt so well that she could not be induced to continue treatment any longer. She was without treatment twenty-three days, when the former symptoms began to return, the specific gravity of the urine was 1,032, the quantity passed in twenty-four hours 150 ounces, and it contained sugar in abundance. The treatment was resumed, and again the general condition of the patient was improving. The case was still under observation.

CASE IV.—A gentleman, first seen in 1873. He had lost fifty pounds in weight. His urine had a specific gravity of 1,044, contained sugar in great abundance, and the quantity passed in twenty-four hours varied from 200 to 220 ounces. He was placed upon the use of codeia, the proper diet, and the free

use of claret with his meals, and in eighteen months he gained in weight thirty-five pounds, and the specific gravity and quantity of the urine had reached the normal, sugar had disappeared, and at the present time he was in excellent physical condition.

From the results in these cases, Dr. Smith thought we should take a more favorable view of this disease, with reference to prognosis, than had heretofore been done. Either they had been fortunate in getting cases early, or in getting exceptional cases, or else the course of treatment pursued had been very successful.

An analysis of the cases showed that all occurred in connection with disturbances of the nervous system. In none was there any injury or sudden shock, but continuous mental strain. All exhibited disturbances of gastric and hepatic digestion; in none had there been malaria, albuminuria, rheumatism, nor addiction to the use of alcohol; in none was there any trouble with vision; in none was there any skin affection; thirst was marked in only one; hereditary trouble was traceable in only one; and in none was there any increase of appetite.

Dr. Smith then gave the history of a case reported by Dr. Gaspar Griswold, in which glycosuria existed without increase in the quantity of urine, or other symptoms commonly present in diabetes. Sugar was present in quantities varying from three to twelve grains to the ounce of urine.

The paper being before the Academy for discussion,

Dr. Austin Flint said that diabetes mellitus either occurred with greater frequency than formerly, or else it was more frequently recognized than it hitherto had been. He had seen more cases within the last five or six years than in almost his whole previous professional life. He thought that the explanation was in the fact that the disease was formerly often overlooked, because examinations of the urine were not so commonly made as now. If there were no special circumstances to suggest the examination of the urine for sugar, the examiner had usually been content with an examination concerning albumen and casts, not always testing for specific gravity. Another reason was that in a certain proportion of cases of diabetes, certainly at some stages of the disease, there may be no increase in the quantity of urine, no thirst, nor other special symptom to excite suspicion of the existence of the disease. Several such cases had come under his observation, and the discovery of sugar in the urine had been accidental rather than otherwise. He then related a case, that of a patient who had no symptom except slight itching, persistent, at the end of the penis. In that case recovery took place within a short time, and the sugar had not returned in the urine, although when first examined it was present in abundance. In several cases which he had seen not only was the urine not increased in quantity, but its specific gravity was not above the normal. He was able to concur with the author of the paper concerning a favorable prognosis in a considerable proportion of cases of diabetes. He had notes of several cases in which recovery, apparently, was persistent. He had also found that dietetic treatment caused sugar either to disappear entirely, or to be reduced to a very small quantity in a short space of time. He regarded the important treatment to be dietetic, and had been led to believe that failure had been due, in a very large measure, if not entirely, to lack of thoroughness in its being carried out. The diet should be made satisfactory to the patient, as well as rigidly adhered to. His rule was to give the patient a list of articles of diet which he might take, and also a list of the articles of which he must not take, so that both lists could be referred to constantly. General directions concerning diet were quite certainly not effectually carried out. But there should be such a combination and variation in the articles of diet as to render it satisfactory to the palate. It would require considerable care to accomplish this, but it was an essential part of the treatment. So far as his experience went, there were but few patients who would be content with taking bread made from pure husk of wheat; therefore he advised such persons as could not, to take bread made from flour which is not absolutely free from starch. As regards medicinal treatment, he had not used codeia systematically, as recommended by Pavy, and adopted by Dr. Smith.

Within the last few years Dr. N. C. Husted, formerly of New York, now of Tarrytown, and who had been afflicted with the disease, had recommended the *sulphide of calcium* in the treatment of diabetes as a remedy which possesses a great deal of efficacy. Dr. F. had prescribed it in perhaps a dozen cases, and had been led to entertain a strong impression that the remedy was one which had a certain degree of curative power in this affection.

Another point of interest in connection with diabetes was the sudden occurrence of symptoms produced by some toxical agency, a condition called by some writers acetonæmia. Of such cases he had seen several, and the prominent symptoms had been coma suddenly developed, embarrassment of respiration, without anything recognizable by physical exploration of the thorax to account for it. The urine was sufficiently abundant, and the proportion of urea present sufficient to exclude uræmia.

With reference to prognosis, he knew of half a dozen patients in the city who had had diabetes, and were in the enjoyment of a comfortable degree of health. Most of them found it necessary, however, to continue to observe more or less strictly the dietetic treatment. He believed that, with proper means and proper care, permanent cure would result in a certain proportion of cases, and that if recovery did not take place the disease could be kept in abeyance, and a comfortable degree of health maintained for an indefinite period.

Dr. S. T. Hubbard had had two cases under observation, one for four and the other for two years. The patients were fifty and sixty years of age, women in easy circumstances, and had never been subjected to any great mental strain so far as he knew. The treatment had been to take a tablespoonful of brewers' yeast three or four times a day.

Some years ago he saw a well-marked case in a child two years of age. It progressed rapidly to a fatal termination.

In none of his cases had cure been effected.

Dr. V. P. Gibney referred to a case of infantile paralysis in a girl, and diabetes developed when the patient was about fourteen years of age. She came from a decidedly neurotic family, and it was thought by some physicians that there was a connection between the nervous disease and the diabetes, but no direct relation of cause to effect could be made out.

Dr. Kinnicutt thought it important to bear in mind that there were two distinct forms of the affection: 1st, that in which there is ability to digest only a moderate quantity of saccharine food, a form readily controlled by strict observation of dietetic rules; and 2d, that in which there is serious perversion of the glycogenic function of the liver, and

which was never fully controlled. In the latter cases prognosis should be especially guarded, as the patients were constantly in danger, from slight causes, such as over-exercise, of the production of the condition called diabetic coma or collapse, so uniformly fatal. With reference to acetonæmia, he had lately seen in an Austrian journal the report of a case in which acetone was found in the urine and glycosuria could not be detected, a fact which showed, so far as it went, that diabetic coma was not acetonæmia.

Dr. John C. Peters thought that Dr. Barker and Dr. Smith had in one direction builded better than they thought. For there were cases which had been benefited by aloes, a series of cases that had been relieved by rhubarb, and a large number of cases in which relief had been afforded by nux vomica. The pill which they had used in connection with codeia contained two of those drugs. He had rather adopted the view that the disease was of nervous origin, and had been led to regard nux vomica as the best remedy for it.

He agreed with Dr. Kinnicutt with reference to the existence of two forms of the disease, one in which improvement followed a proper diet, and another in which little or no benefit was derived from dietetic treatment. His observation had been that the disease was milder in old than in young patients, and also more amenable to treatment. In the obese patient, also, the disease was more manageable than in the lean, spare patient, in whom it was usually very unmanageable.

He regarded the basis of the disease as a vaso-motor disturbance, and believed that by the aid of vaso-motor tonics, such as nux vomica, physostigma, perhaps digitalis and ergot, the best results were to be obtained.

The President added another case to those reported by Dr. Smith, in which the same method of treatment yielded equally satisfactory results.

Dr. A. C. Post asked with regard to the frequency of the occurrence of gangrene in connection with diabetes.

Dr. Flint recalled three cases of gangrene of the lower extremities.

Dr. Peters recalled one case of gangrene of the leg.

Dr. William H. Draper thought that the nervous theory of the etiology of diabetes was the one which must be accepted, when the experimental researches made in the artificial production of the disease in animals, and also the clinical histories of cases were taken into consideration. A considerable number of cases had been due to traumatism of the brain, and in many cases the disease could be distinctly traced to some nervous shock as its starting-point. But after all the liver appeared to be the organ which was the chief instrument in the production of the affection, and his remarks were made with regard to the association of diabetes with another form of disease which Bence Jones had described as the sour disease, in contradistinction to the sweet disease. In other words, he thought that the clinical experience of most observers showed that the great majority of cases of diabetes were associated with lithæmia; that there was an error in the digestion of nitrogenous as well as the carbonaceous foods. He thought it could be shown that in many cases of the graver forms of diabetes there was a hereditary history of gout, or the disease was already illustrated in patients themselves. It would be found in these cases that there was not only sugar in the urine, but also, very often, an excess of urea and uric acid. In the milder forms of diabetes, the intermittent, he thought the association of these two conditions was more marked than in the severe variety of the affection. It would also be found that these patients had been subject to true gouty lesions, or cutaneous or catarrhal or arthritic lesions.

Another circumstance which went to show the association of these two maladies, was that the diabetic patient and the gouty patient were relieved by the same kind of diet and medication; that the nitrogenous diet is that upon which these patients thrive best, paradoxical as it might seem. As an item in the proof of that statement, it was only necesary to refer to the renown which alkaline springs had obtained, and justly so, in the treatment of these two diseases.

He agreed with Dr. Flint as regards the superiority of the dietetic management of diabetic cases. He thought that until we could reach a true estimate of the utility of medicines without dietetic treatment, it was not possible to estimate exactly the value of medicines in the treatment of this disease. Almost always those remedies which had obtained the greatest reputation in the treatment of diabetes, outside of alkalies, had been used in conjunction with dietetic treatment.

Another fact which had a bearing upon the view that lithæmia and diabetes were associated diseases, was that the different forms of medication which had been used for diabetes were those which were more or less applicable to functional disorders in gouty persons. With regard to the opium treatment, he had not had a large experience. Although Dr. Pavy had attached great importance to it, Dr. Dickinson had not had equal success in its use. Dr. Draper had had some experience in the use of sulphide of calcium, and had been much pleased with the results. The remedy, however, was not used without restricting the diet. In the grave forms of the disease he did not believe there was any remedy which did any good.

Dr. Smith, in closing the discussion, said that while he took the view that in the great majority of cases diabetes had its origin in the nervous system, he was not prepared to say that in some cases it did not have its origin in some other organ of the body, and it had seemed to him that, from recent observations, the pancreas might be the organ sometimes at fault. With reference to diet he did not agree with Dr. Draper, that gouty and diabetic patients could digest the same foods equally well.

With regard to codeia, he thought that it was applicable in grave as well as in mild cases. Even in those in which sugar was produced from a meat diet, he believed that codeia placed the nervous system in such a condition that the sugar was not produced to such an extent as it would be were the drug withheld. Although the view was theoretical, he believed that it had been sustained by clinical observations.

The academy then adjourned.

The Treatment of Phthisical Laryngitis by iodoform, which has been employed by Lincoln, Bosworth, and others in this city for several years, is now being adopted by the Germans. Dr. Beetz, in an article upon the therapeutics of this disease, discusses and commends the use of iodoform, which possesses almost a specific action against syphilitic, scrofulous and tubercular ulcers.

NEW YORK PATHOLOGICAL SOCIETY.

Anniversary Meeting, January 11, 1882.

Dr. T. E Satterthwaite, President, in the Chair.

ABDOMINAL TUMOR.

Dr John P. Garrish presented a tumor, removed post-mortem from the body of an unmarried woman, aged forty-three, and with the following history: The patient had enjoyed good health, had operated with a sewing machine from eight to ten hours daily during the last seventeen or eighteen years, and seven months ago, for the first, suffered from pain in the lower part of the abdomen. She then consulted a physician, who told her that probably there was some peritonitis which caused the pain. After a little time the physician discovered a tumor in the region of the uterus. It gradually enlarged, and an operation was proposed for its removal. The patient declined the proposal, and came under the care of Dr. Garrish on October 15, 1881, who detected a tumor extending from the pelvis upward nearly to the umbilicus, sufficiently large to entirely fill the lower part of the abdominal cavity, and exceedingly hard. Menstruation had been regular up to the time the patient came under Dr. Garrish's observation. She had leucorrhœa. There was an abrasion or ulceration of the cervix of sufficient size to more than cover the field of an ordinary-sized speculum, and it bled readily when touched with cotton. Nitrate of silver was applied twice a week, the ulceration or abrasion healed entirely, and the leucorrhœa was arrested.

The patient's general condition also improved, and she continued to visit the doctor at his office until early in December, when she was taken with severe pain, referred to both iliac regions. There was no difficulty in urination throughout the course of the disease. At one time the stomach was so irritable that it became necessary to resort to rectal alimentation for a few days, after which the patient was able to retain food while she lived. The chief complaint which the patient made was of a "tiresome feeling," and the only position which gave her any ease was lying upon the abdomen. She died of exhaustion on December 21, 1881. At the autopsy, the tumor, the stomach, the intestines, and the pelvic organs were found firmly adherent to each other, and were removed *en masse*.

The specimen was referred to the Committee on Microscopy. Dr. Garrish thought it was carcinomatous.

THE LONGITUDINAL WHITE LINE IN THE CORTICAL LAYER OF THE BRAIN.

Dr. John C. Dalton presented several sections of the brain which showed the longitudinal white line present in the cortical layer in some parts of the occipital lobes. There were two things about this line which of late had attracted his special attention.

First, it is confined to the convolutions bordering upon the fissure of Calcarini. It had been long known that it was noticeable especially in the convolutions of the occipital lobe; but he had not seen any statement in which the fissure of Calcarini was mentioned in connection with it.

Again, why this structure should be just here and nowhere else, he did not know; nor, so far as he had been able to determine, had a satisfactory answer been given to that question, although the line was very distinct. It had been examined microscopically by different observers, but the results had been unsatisfactory.

Dr. E. C. Seguin remarked that, upon examination of sections of different parts of the brain, one sees a number of lines made up of nervous fibres. He had always supposed that this white line was composed of an exaggeration of these *commissural fibres*, as they were usually regarded, of which distinct bundles can be seen in almost any section of the cortex. Thirty years ago some observers described from *four* to *six* distinct layers in the convolutions, as seen without special preparation or staining. It was interesting to know that this line is limited to the particular part of the brain mentioned.

TUMOR OF THE ANTRUM.

Dr. John A. Wyeth presented a specimen removed from the right antrum of Highmore of a German aged thirty-five. The disease attracted the attention of the patient three months before admission to the hospital. The operation was performed by removing a portion of the bone, and, in addition, it became unexpectedly necessary to remove the whole of the superior maxilla, the right palate and malar bone, and a part of the ethmoid and sphenoid. As a preparatory step, tracheotomy was performed, and the pharynx packed full of sponge, to prevent the blood from gravitating into the larynx. The hemorrhage was considerable, was somewhat controlled by ligatures and the Paquelin cautery, and the operation lasted more than two hours. The patient never rallied, and died thirty-eight hours afterward.

The specimen was referred to the Microscopical Committee. Dr. Wyeth thought it was carcinomatous.

Dr. Beverly Robinson presented a

HEART WEIGHING FORTY-THREE OUNCES,

removed from the body of a middle aged man, who presented the symptoms usually accompanying extensive and varied cardiac lesions. Both ventricular cavities were dilated, and the aortic valves illustrated thickening and vegetations. Four murmurs were heard.

FATTY HEART; INTERSTITIAL NEPHRITIS—WAXY LIVER; INTERSTITIAL HEPATITIS.

Dr. Robinson also presented a heart, the muscular tissue of which had been markedly encroached upon by the deposition of fat externally. The wall of the right ventricle, particularly, was very thin. The specimen was accompanied by a portion of the liver, which illustrated waxy degeneration and syphilitic hepatitis.

Notes of the following history were furnished by Dr. W. C. Campbell, house physician at St. Luke's Hospital. F. A. ——, aged forty-six, native of United States, and a clerk, was admitted December 17, 1881. The patient gave a history of syphilis. He had had gonorrhœa several times, and, since 1876, rheumatism in nearly all of his joints at different times. Five months before admission he began to lose strength, became pale, and at times suffered from dizziness. Micturition was increased in frequency, and the quantity of urine somewhat more than normal. About a month later the patient had attacks of vomiting, which occurred at intervals of two weeks or more and lasted about twenty-four hours. There were no distinct cerebral symptoms. At the same time his ankles began to swell, and the œdema sub-

sequently extended to the knees and then gradually disappeared.

Six days previous to admission the patient had a severe diarrhœa, which reduced his strength very much. He made water six or seven times in twenty-four hours, without pain or special change from the normal in quantity.

At no time during his life had he suffered from palpitation or pain in the præcordial region, nor had he ever had severe cough. When admitted he complained only of extreme prostration. He was much emaciated. There was no œdema of any part of the body. Physical examination of the lungs was negative. The cardiac impulse was feeble, but no murmurs were detected. The urine had a specific gravity of 1010, was acid, and contained ten per cent. of albumen. Stimulants and tonics were administered, but the patient's condition did not improve.

On December 27th the patient was seized with a severe pain in the epigastric region, and soon began to vomit. The vomiting persisted despite remedial measures, the patient grew weaker rapidly, and died at 1 P.M., December 29th, respiration continuing after the heart had ceased to beat.

At the autopsy the body was emaciated, rigor mortis and mottling absent. The walls of the right ventricle of the heart were very thin, and they were covered with a thick layer of fat. The valves of the heart were normal, and the organ weighed fourteen and one-half ounces.

The *lungs* were normal. The *liver* weighed five pounds, was hard and lobulated, and was the seat of amyloid change, as demonstrated by the iodine test.

The *kidneys* were small, capsule not adherent, surface granular. There was an abscess in the right kidney about three-eighths of an inch in diameter.

The spleen was very much enlarged, was firmly adherent to the diaphragm, and throughout its pulp were found hard pus-points.

When the intestines were lifted from the abdominal cavity, an unusual deposit of adipose tissue was seen to cover the entire posterior abdominal wall, at least one or two centimetres thick in places.

The interesting features of the case were the emaciation, with extensive deposit of fat internally, the lobulated appearance of the liver in connection with a syphilitic history, and the chronic interstitial nephritis without cardiac hypertrophy.

Dr. Peabody asked if the kidneys were not the seat of amyloid change as well as the liver. If so, the absence of cardiac hypertrophy with interstitial nephritis could be readily explained, for it was characteristic of amyloid kidney with diffuse nephritis *not* to be accompanied with hypertrophy of the walls of the left ventricle of the heart

The President remarked that the kidneys were not examined with reference to amyloid degeneration; that the muscular tissue of the heart was in the condition of fatty degeneration, especially that of the right ventricle, and that the liver-tissue exhibited the ordinary reaction with iodine. There was no cirrhotic change manifest, except at the points already pointed out by Dr. Robinson, but it did not seem to be the cirrhosis usually, so far as his observation extended, seen in syphilis, where the connective tissue penetrates all through the organ. He was inclined to regard the specimen as one of old hepatitis beginning upon the outside and gradually extending inward.

Dr. Peabody remarked that, according to his observation, waxy change in the kidneys was invariably accompanied with changes in the interstitial tissue, as well as the epithelium, and, no matter how far advanced the interstitial nephritis, it was not accompanied by cardiac hypertrophy.

The President said his experience showed that waxy change was always accompanied by chronic diffuse changes in the kidney structure, although that view was not accepted by all observers.

Dr. Ripley said that, in the syphilitic livers which he had had opportunity to examine, the hepatitis was most marked upon the surface, and diminished in proportion to the situation of the tissue beneath the surface; that more or less circumscribed areas of interstitial change existed, whereas in ordinary cirrhosis the hepatitis was more uniformly diffused throughout the organ. He thought that in Dr. Robinson's specimens the liver was too large to indicate that the lobulated condition it presented was due to changes occurring in gummatous tumors.

The President remarked that, with gummata in the liver and subsequent retrogressive changes, there was usually a little nodule of cicatricial tissue left, which was stained of a yellowish white color. No such points were found in the specimen presented by Dr. Robinson.

The puckering occupies larger circumscribed areas in syphilitic than in ordinary hepatitis, and in the intervening spaces there might be tolerably healthy tissue.

The society then went into executive session.

MATERIA MEDICA SOCIETY.

Stated Meeting, December 29, 1881.

Dr. Piffard, President, in the Chair.

IODOFORM IN GYNÆCOLOGICAL PRACTICE.

Dr. Foster, in a paper on the above subject, stated that for the past two years or so he had had considerable experience in the local use of iodoform as a sorbefacient in cases in which chronic extra-uterine exudation and its sequelæ were the chief factors in producing the symptoms complained of. The promptest and most satisfactory results were obtained in instances of palpable pelvic exudation. These cases, however, did better under the more usual methods of treatment than those in which the exudation was not to be detected by palpation, but was inferred to be present from conditions not to be explained by any other theory. Nevertheless, bulky exudations sometimes proved utterly rebellious to treatment. Recent or remote formation, a point not always easily determined, was a matter to be considered. Dr. Foster was convinced that these cases of chronic extra-uterine exudation, occurring principally in patients of an out-door service, in women of low social status and unfavorable surroundings, did progress more favorably than they would have done under the same circumstances without the use of iodoform. In the majority of cases, vaginal injections of warm water were prescribed, but in many instances probably neglected by the patients. In every case, however, in which they were ordered, the author took it for granted that they were faithfully used. When therefore he stated his impression that in this particular set of cases iodoform was more serviceable than any of the other remedies employed, he did not wish to be understood as denying the paramount value of hot water, properly and conscientiously used. Such an employment being assured, he esteemed the three great remedies for extra-uterine pelvic inflammation

in the following order: (1) hot water; (2) iodoform; (3) galvanism. He preferred to apply the iodoform to the upper part of the vagina, and tampon the whole vaginal canal with wicking, as described in the *New York Medical Journal*, June, 1880. The tampon was of great service by its mechanical action, and also tended to shut in the odor. The taste of the drug thus applied was sometimes complained of immediately, indicating that it had either made its way into the uterine cavity, or been more promptly absorbed by the vagina than other medicaments usually were. In dysmenorrhœa the relief afforded by rectal suppositories of iodoform was sometimes striking, but the remedy could not be relied upon to control the pain in successive menstruations. In pruritus vulvæ, hyperæsthesia of the vulvo-vaginal orifice, and inflammation of Bartholin's gland, it was more serviceable than any other single application used. In cases of pelvic pain without appreciable structural abnormality, or in which examination was unadvisable, iodoform in the form of suppositories, though inferior to opium, was free from the latter's objectionable qualities. In a case of oöphoralgia great relief was not obtained. In catarrhal affections it was useless. In cervical hyperplasia, the author placed considerable confidence in iodoform as a discutient, although he did not regard it superior to other measures in common use. The continual use of rectal suppositories of this drug was objectionable on account of the odor; in many cases, however, their employment was a valuable resource.

Dr. Smith referred to several cases of membranous dysmenorrhœa in which iodoform had been employed with exceedingly gratifying results. He alluded to the case of one of Dr. Barker's patients, a married lady, who had been afflicted for seven years with this trouble. Upon one occasion she passed a sufficient quantity of membrane to have specimens of it sent to the professors of gynecology in the three New York schools. A complete cure followed the iodoform treatment. He knew of two other cases in which equally good results had been obtained. Four cases he saw himself. Applications were made twice a week, and every day for a few days before menstruation. Complete relief followed. In one instance the patient tasted the drug within sixty seconds after its application. Speaking of the odor of iodoform, he stated his doubts as to the possibility of repressing it by packing the drug in the vagina with a tampon. He had tried ether and found that it controlled the odor until the ether evaporated. Balsam of Peru was the best deodorizer, and superior to balsam of tolu. He had used a mixture of iodoform and Peruvian balsam in uterine practice with apparent success, and also employed it as a local application to the larynx. In carcinoma uteri it certainly relieved pain and substituted its own odor for that of cancer.

Dr. Bronson stated that the essential point in repressing the odor was to make the powder into a paste, thus rendering it impossible to scatter. It might be made so with glycerine and mucilage to which the essential oil of peppermint or wintergreen was added. As soon, however, as the scent of the essential oil had disappeared, the iodoform odor asserted itself to a greater or less degree. He had used Peruvian balsam, but found it did not control the odor better than the paste.

Dr. Morrow had seen it stated that hydrated chloral in combination with iodoform would act as a deodorizer.

Dr. Mundé had used iodoform extensively in dispensary and office practice, but did not find that patients objected very much to the odor. The drug was very carefully applied to the cervix, and the vagina well packed. Although he got a good deal of the odor himself, his patients rarely complained; but if they themselves did not notice the odor, their friends would. He had used the drug combined with glycerine and oil of peppermint, but the scent of peppermint was quite as disagreeable as the iodoform odor, and attracted quite as much attention. He now used tannin with the drug; tannin controlled the odor and was synergistic to the iodoform. He had employed iodoform with success in cervical erosion and endotrachetitis. A most useful formula was that mentioned by Dr. Smith: a drachm of iodoform, and half a drachm of the balsam of Peru, to one ounce of glycerine. This was about as inodorous a preparation as could be obtained. He thought that in his experience he had obtained better results from the healing effect of iodoform in cervical erosion and its soothing action in carcinoma than when employed as a sorbefacient. In instances of chronic pelvic exudations he was always very much in doubt as to whether the diminution in size of the uterus and its increased mobility were due to plugging the vagina and painting the roof with tincture of iodine, or to the effects of the iodoform. Still, he thought, besides relieving pain, it increased the rapidity of absorption and the return of uterine mobility. The best success was obtained in simple catarrhal erosion of the cervix, either with or without endotrachetitis. He first cured the endotrachetitis and afterward applied iodoform alone or combined with tannin, simply applying these over the surface of the canal every other day or twice a week. He mentioned a case of membranous dysmenorrhœa in which considerable relief resulted from the use of iodoform pencils. Cure, however, was completed by local galvanization, inasmuch as the taste of iodoform proved objectionable. Dr. Mundé had used the drug in vulvar and vaginal diseases, chiefly in cases of erosion of the parts dependent upon vaginitis or profuse discharge, also in a case of hyperæsthesia of the caruncle of the meatus. No special benefit was derived from its employment, and on account of its odor it was abandoned. He looked upon iodoform as a useful drug, but as one which should be used only as auxiliary to other remedies. He thought it was of value in erosion of the cervix, in chronic endotrachetitis, and in carcinoma (employed in the shape of powder); in chronic pelvic peritonitis, with tampons saturated with the mixture of Peruvian balm and iodoform, good results were obtained after long trial.

Dr. Lusk was in the habit of using iodoform in fissure of the anus in children, and looked upon it as a specific. It cured more speedily than any other remedy. Applied to lampwick and drawn into the fissure it gave complete relief in the course of twenty-four hours, the fissure healing in a few days. Tearing of the sphincter was thus done away with. This treatment was also applicable to grown persons.

Dr. Bosworth thought the best way to use iodoform was in solution in glycerine.

Dr. Webster asked why the taste of iodoform was appreciated sooner after a uterine than after a vaginal application, and whether the drug appeared in the saliva.

Dr. Foster stated his opinion that the uterine mucous membrane absorbed the iodoform more rapidly than the vaginal. He had notes, however, of

cases in which the taste was perceptible immediately after a vaginal application. In some cases the vaginal mucous membrane absorbed more promptly than the uterine. He thought it probable that iodoform was secreted in the saliva after local application. He had not treated any cases of membranous dysmenorrhœa since adoptiug iodoform. In order to repress the odor he had used an ointment containing Peruvian balm, and had also employed the drug in combination with tannin. He had seen it recommended to keep it in a bottle with tonka bean, and had tried that. He had given all the methods mentioned a trial, with the exception of the hydrated chloral, and held them to be absolutely worthless; he believed nothing could prevent the patient from exhaling the odor of iodoform. In regard to the use of iodoform in endotrachetitis, he had come to the conclusion that it was of no service, and had abandoned it. Perhaps he had encountered very rebellious cases at the outset.

Dr. Sexton stated that he had given the drug a pretty thorough trial six or seven years ago. He had used it mainly in suppurative inflammatiou of the middle ear, especially where granulation-tissue was abundant. After a rather unsatisfactory experience of two or three years, its use was abandoned. Dr. Sexton did not think it possessed any advantages over bromine or nitrate of silver. He did not think much of it in aural practice. He had frequently noticed that patients referred to tasting the drug soon after its insufflation. Other strong substances acted in a similar way; even the introduction of a probe caused a metallic taste.

Dr. Bronson had had some experience with iodoform administered externally and internally, and was convinced that it possessed valuable sorbefacient and anæsthetic properties. Its internal use was indicated by Dr. Berkeley Hill in syphilitic ulcerative disease of the tongue. Dr. Bronson had used it in two or three cases of ulcerative disease of the tongue, and in disease of this organ associated with keratosis, hypertrophy of the lingual epithelium. In a few cases the effect was remarkable. In one case of marked thickening and deep fissures through the epithelium, associated with impairment of the sense of taste, the remedy was begun in doses of one grain t. i. d., subsequently increased to three grains t. i. d. The patient took the drug for a week, and an almost complete cure resulted; the iodoform, however, was discontinued, on account of the intolerable impression produced upon the gustatory and olfactory organs. In other cases of ulcerative disease its effects were very gratifying where mixed treatment was unavailing. Two theories had been broached as to the action of iodoform; according to one it acted as iodoform, according to the other as iodine. It was claimed by some that it was absorbed as iodide of starch. Dr. Bronson thought it acted both as iodine and as iodoform; that, in addition to the properties of iodine, it exhibited effects peculiar to itself. He had had extensive experience with iodoform in chancres, orchitis, and diseases about the anus, especially fissure and pruritis. In fissure of the anus he did not consider it a specific, as Dr. Lusk did, but rather a valuable adjuvant. In several cases in which he had used it, it controlled spasm almost completely, diminished reflex irritability of the urinary organs, and enabled him to treat by caustics cases of deep laceration. His experience in pruritus vulvæ had been disappointing. He had used the remedy with ether, collodion, etc., but thought it inferior to carbolic acid. In orchitis its sorbefacient qualities were marked. In most cases with considerable enlargement of the epididymis, in which the inflammation was not of so high a grade as to involve the skin of the scrotum, the effects were quite notable. He had used it in the New York Dispensary, employing it in combination with camphor, and made up into an ointment with vaseline. The camphor was subsequently discontinued, the advantage of the combination not being very apparent. The formula was iodoform, ʒj., camphor, ℥j., vaseline, ℥j. When treated in this way a great amelioration was experienced in the majority of cases; there was marked subsidence of the swelling, and cessation of the pain in the course of a week. It had been claimed that iodoform was of no utility in phagedæna. Dr. Bronson's experience was that, while in some forms of this disease *no* remedy was of avail, in the common phagedæna healing might be brought about more rapidly by iodoform than by any other remedy. The best results in chancre (hard or soft) were obtained from iodoform.

Dr. Morrow's experience with iodoform had principally been with chancrous sores. He had used it in the Female Dispensary of the New York Service for several years. He had employed it in half a dozen cases of fissure of the anus complicated with ulceration, and had obtained excellent results. He had been in the habit of exposing the ulcerated surfaces with the speculum, and applying the remedy by means of the powder-bottle. The odor was very objectionable, but still the remarkable results obtained had induced patients to persist in this treatment despite of this inconvenience.

Dr. Fox had had much the same experience as Dr. Bronson, and agreed with his statements in regard to genital sores—chancres and chancroids. Slight phagedæna seemed to be promptly checked by iodoform. The old practice of cauterizing every suspicious sore was fast becoming obsolete, for there was no lesion upon the penis or labium which would not heal more rapidly under iodoform than when cauterized. Dr. Fox thought iodoform was of benefit in pruritus, especially in pruritus vulvæ, but supposed that it would be inefficacious when employed with collodion, because of the layer interposed between the drug and the surface.

Ether rather served to increase the itching. Used in vaseline, he had seen good results in a number of these cases, and also in chronic eczema. In regard to its use in epididymitis, he had employed it according to the plan of Alvarez. Having obtained no desired effect whatever, he had abandoned it in favor of other remedies. As an application to ulcerations, the ether solution was the best, as it carried the remedy among the granulations. He had recently used it with success in lupus upon the extremities, as recommended by some German authority, first scraping the surfaces slightly, then applying the iodoform in powder, and covering them with cotton for forty-eight or seventy-two hours. He had not had sufficient experience in lupus to make decided statements. Where the application of a tight bandage was possible, this procedure might be adopted.

Dr. Webster stated that Dr. Agnew and himself had used iodoform in suppurative otitis media. His experience was that of Dr. Sexton; if it did good at all, it was certainly not superior to other remedies. They finally abandoned its use. He knew of a case of acute otitis media in which it certainly was of no value. He had also used it in cases of granular lids, pannus, and ulcer of the cornea. It

had been highly recommended in these cases. In granular lids the lid was to be turned over and the iodoform dusted upon the palpebral conjunctiva, and in ulcer of the cornea upon the cornea, every day or every other day. After several trials this procedure was discontinued, not so much on account of objections on the part of the patient under treatment as by reason of the remonstrances of the rest of the *clientèle* who subsequently visited the office. Dr. Webster had not used iodoform in office practice for the last three years.

Dr. Mundé agreed with Dr. Fox's opinion that collodion might interfere with the action of iodoform.

Dr. Foster, in reply, referred to blistering collodion as a proof of the fact that collodion would not act in the manner supposed.

Dr. Sexton asked how soon, after application to the uterus, iodoform was tasted.

Dr. Foster stated that the taste of the drug was appreciable to the patient immediately after leaving the table, and expressed the opinion that the remedy passed through the circulation in the meantime.

Dr. Sexton related a case in which on iodoform application a peculiar sensation passed from the right ovarian region to the ear, an indefinite taste, not of iodoform, being experienced at the same time. When applied to the ear, Dr. Sexton thought iodoform produced this sensation of taste through nervous transmission.

Dr. Foster stated that patients often likened the taste to the sensation produced by a galvanic battery. After what Dr. Sexton had said in regard to the sensation in the mouth, produced by passing a probe into the ear, he was inclined to think the taste produced was a phenomenon of nervous transmission. He supposed other applications than iodoform to the uterus would give rise to it.

Dr. Mundé stated that patients had complained of a metallic taste after the application of iodine to the uterus.

Dr. Bosworth thought iodoform was of no value in reducing hypertrophy or in checking catarrhal secretions. It was of exceedingly great efficacy in broken surfaces, erosions of the cervix, fissures of the anus, and chancre. He had observed that iodoform was rapidly absorbed by the uterus. In ulcerative syphilis of the air-passages he had obtained brilliant results, a single application to a superficial ulcer relieving pain and enabling the patient to swallow. In laryngeal ulcer, fissure of the tongue, and keratosis, good effects were obtained. It certainly relieved pain and corrected fetor in carcinoma, but did not affect the disease. Dr. Bosworth cauterized no ulcer but the mucous patch: all others were amenable to iodoform He did not find that patients objected much to the use of the drug, which he now employed extensively. A case of ulcer of the leg of thirteen months' standing was cured by iodoform in seven days.

Dr. Fox stated that he had had one case himself, and had seen two or three reported, in which there were symptoms referable to the toxic action of iodoform. In one of the latter instances, a case of excision of the knee-joint, these symptoms had followed the procedure of packing the wound with a large quantity of the pure powder.

Dr. Piffard had had but little experience with iodoform in gynæcological practice. He had given up the use of iodoform in hard chancres. He thought that if a recent chancroid were cauterized in an efficient manner, a healing surface would be left on separation of the slough. Where the cautery has not been used he had seen chancroids lasting for weeks, months, or even years as chronic chancroid. He did not think iodoform with collodion was as odorous as when in the form of an ointment, or as powder. The difficulty, however, was that the iodoform soon settled. The objection raised as to the efficacy of iodoform combined with collodion was one of interest, and was answered by Dr. Foster's reference to blistering collodion. Dr. Piffard had been experimenting with various collodion preparations, and had found them to be very efficacious and active locally. He thought iodoform was more efficacious in the form of a fine powder than in any other dry form. The difficulty was to find a druggist who would care to reduce it to this condition. Coumarine, derived from the tonka bean, was recommended as a deodorizer for iodoform.

The society then adjourned.

Correspondence.

THE REVISION OF ITS SYSTEM OF MEDICAL ETHICS BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

To the Editor of The Medical Record.

Dear Sir: There seems to be a misapprehension in the minds of some of the writers upon the recent debate in the State Medical Society which ended in the adoption of the Code of Ethics, reported by the special committee appointed for that purpose. I think I can correct this misapprehension by a brief statement of facts taken from the report of the proceedings of the society published in your own columns. It is not quite correct to say that the substitute offered by Dr. Roosa failed on its final passage, for there never was any attempt made to put it on a final passage. After a discussion of nearly three hours, the substitute was carried by a majority of two, the ayes and nays having been called. The President ruled that this substitute required a two-thirds vote for its passage, because it was virtually an amendment to the by-law, which prescribes that the society shall be governed by the Code of Ethics of the American Medical Association as well as the System of Medical Ethics of the Medical Society of the State of New York. I then held, and still believe, that the substitute having been carried, the report of the committee was, so to speak, out of court, that the next step was to amend the by-law so that it might accord with the will of the majority, and that, failing in this, the whole subject was left as though nothing had been done. But, rather than continue an already much-protracted discussion, and rather than imperil the adoption of the report of the committee, which consisted of a code greatly in advance of the one formerly governing the society, the friends of the substitute urged each other to accept the ruling of the chair and support the revised code, and thus secure for it the requisite two-thirds vote. It will readily be seen that the report of the committee must have miserably failed of passage had the friends of the substitute refused to support it; for 39 voted for the substitute and only 52 finally for the report of the committee. If we deduct the 39 votes, or, to be perfectly fair, 34 votes, of the sustainers of the substitute

from the 52, it will be seen that only 18 were found who were unqualifiedly in favor of the revised code as reported by the committee. The sentiment of the society was, therefore, in favor of the substitute. The report of the committee was accepted only under the belief that, at that late hour, nothing better could be had. Whatever victory there may have been belongs to the friends of the substitute, to those who believe that a hand-book of etiquette is not needed by the profession, and who think with Dr. Squibb that if the barriers as regards consultations are thrown down, all other restrictions might properly be left to the discretion of county societies to determine. I will also state that it is an incorrect idea, found in a Philadelphian and some other journals, that only the New York city members were in favor of the substitute and the report of the committee. Analysis of the yeas and nays will show, I think, that the sentiment throughout the State was as much in favor of a thorough revision as in the City of New York. The friends of the old code will find that the majority in the State Society represents the feeling, not of the profession in New York and Brooklyn alone, but of the entire State, the votes being well distributed through the counties.

I am, sir, yours very respectfully,

D. B. St. John Roosa.

New York, February 20, 1882.

ARE THERE SCHOOLS OF MEDICINE?

To the Editor of The Medical Record.

Sir: Dr. Maurice Raynaud, in his address prepared for, and read in, the International Congress at London, expressed a doubt in regard to the disappearance of all tendency to the maintenance, in our day, of medical systems. We may accept the designation of one at least of those which he named, physiological medicine; and add two others as now extant—clinical empiricism and expectancy, or therapeutic nihilism.

But the question appears, in some quarters, to have taken a still wider range. All are now familiar with the action of Dr. Quain, and the later utterances of Dr. Bristowe and Mr. Jonathan Hutchinson, in reference to consultations with those who proclaim themselves as belonging to a school hitherto not at all recognized by the regular profession. These gentlemen do not, as we understand them, propose exactly to admit the legitimacy of homœopathy. But the question presses: What can be the logical and ethical basis of such consultations, in the absence of this recognition?

Let us suppose a case. A gentleman occupying a good social position, and usually attended by a homœopathic practitioner, is taken ill with severe malarial remittent fever. He is alarmed, and asks for a consultation with Dr. Pimento or Dr. Corundum. These gentlemen declining, Professor Janus is prevailed upon, by motives of humanity and regard for an influential patient, to attend. Such a sequence as the following may occur. They make together their visit to the room of the patient; all inquiries and examinations are completed, and they retire to the library, with closed doors.

Scene.

Dr. Lactin.—An ill man, doctor, is he not?

Dr. Janus.—Decidedly so. You know him well, I suppose; constitution sound, I hope? Habits good?

Dr. Lactin.—Pretty fair. No more champagne than his neighbors, I believe. Only about sixty years of age.

Dr. Janus.—I don't like that crepitant râle. It complicates the matter badly. What have you been—has he been—ah, excuse me; I forgot, for a moment, your position. We agree in the diagnosis, I believe?

Dr. Lactin.—Entirely; remittent, with pneumonia, early stage, right lung. Very high fever, and active delirium; 106° in the axilla. I confess I don't like it, doctor.

Dr. Janus.—Well, what are we going to do?

Dr. Lactin.—What would you do?

Dr. Janus.—Five grains of quinine every two hours, doctor, for four doses; dry cups to the right side, followed by a large poultice; and then——

Dr. Lactin.—The poultice, well. But do you suppose it possible that a disciple of the immortal Hahnemann can give an unattenuated grain of quinine, even to an elephant or a whale?

Dr. Janus.—Why no, sir. I beg you pardon, sir. Of course not. You must be consistent; I honor your consistency. You will do just exactly what you please. Will he leave a large estate?

Dr. Lactin.—Two millions, they say. A large family, however, besides the wid—I should say the wife.

Dr. Janus.—Well, I have an appointment at twelve; I must go.

Dr. Lactin.—I will ask a favor of you, doctor. I am greatly obliged for this consultation, I assure you. Will be glad at any time to reciprocate. Please do me the further kindness to communicate your prognosis to the family, will you?

Dr. Janus.—Certainly: with much pleasure.

Dr. Lactin.—And also our agreement in diagnosis?

Dr. Janus.—Certainly.

Dr. Lactin.—I am very much obliged to you.

(*Exeunt*, shaking hands cordially, and going down stairs together.)

Putting this into sober English, it appears to be obvious that the only common ground upon which a regular physician can stand with a homœopath, in the consideration of a case of disease, is the province of diagnosis and prognostication. Since the latter, moreover, is conditioned in part upon the results of treatment, diagnosis is left as the only region wherein there can be conceived between them any rational *modus vivendi*.

For the realization of this in practice better than a consultation, as not like that involving any recognition of the professional claims of the homœopathic attendant, will be, in every instance, a *specially arranged visit*, simply for diagnostic examination of the case by the consultant, in the absence of the practitioner who has charge of the treatment of the case. Even this will be repugnant to most members of the profession; but it may be properly open for consideration whether this much might not be, in certain instances at least, conceded to the often unreasoning demands of the public at large.

O. F., M.D.

Philadelphia, Pa.

Honors to a Veterinary Surgeon.—M. Bouley, member of the Paris Institute, Inspector-General of the Veterinary Schools, has been raised from the rank of Officer to that of Commander of the Legion of Honor.

BENNET ON LACERATION OF THE CERVIX UTERI—A CORRECTION.

To the Editor of The Medical Record.

Sir: In the current issue of The Medical Record, page 155, there is a quotation from the *British Medical Journal*, November 26, 1881, entitled "Bennet on Laceration of the Cervix Uteri." As this article will, in all probabilty, be very extensively quoted, I request the privilege of correcting a wrong impression it may convey. It is unfortunate that Dr. Bennet should permit such a publication to go forth after his most decided recantation of the views of his paper He distinctly avowed (in the presence of Drs. Playfair, of London; Hodgen, of St. Louis; Marcy, of Boston, and many others whom I do not remember) in his speech, closing the debate on his paper, that for the *past twenty years he had paid comparatively little attention to gynecological subjects;* and that he felt satisfied that during this period he had not kept pace with the advances made. He further declared himself to be less opposed to the operation than when he read his paper. All this took place in the Obstetric Section of the International Congress, held in London last August, and Dr. Bennet found himself arrayed against Playfair, of London; Marcy, of Boston, Mass.; Goodell, of Philadelphia; Mundé, of New York, and others whom I do not now recall. In the remarks I made on the afternoon of the discussion, I took issue with every objection raised by Dr. Bennet, and he, openly and frankly, accorded me the position of having converted him—his statement was about as follows: "Dr. Pallen, who read his extraordinary paper at the meeting of the British Medical Association, held at Cambridge, in 1880, rather startled me by his advocacy of the treatment of laceration of the cervix, in contradistinction to the views of his compatriot, Dr. Marion Sims, who has equally surprised us by advocating the division of the cervix for certain troubles. But I now find I misapprehended the conditions as then detailed by Dr. Pallen, and if I was wrong in the views I enunciated in this paper, I think Dr. Pallen should be thankful that I gave him such an opportunity to air his opinions. Admitting that I have failed to keep pace with advances made by the gynecologists of the last twenty years, I do not like to have my errors so emphatically denounced as they have been by Drs. Pallen and others," etc.

I appeal to Drs. Hodgen, Marcy, and the other Americans, as well as Drs. Playfair, Williams, and other English gentlemen who were present, if I do not substantially quote the remarks of Dr. Bennet as he made them.

The authorized transactions of the International Medical Congress will soon be in this country, and I hope, Mr. Editor, that you will publish the debate in full on Dr. Bennet's paper. I feel somewhat interested in this matter, because it was in reply to my paper on "The Etiology and Treatment of Lacerations of the Cervix Uteri," read in the obstetric section of the British Medical Association, at Cambridge, in August, 1880, that Dr. Bennet read his essay to the Obstetrical Section of the International Congress, last August, in London.

I reiterate here what I stated there, that Dr. Bennet, in his paper, tenaciously clung to the theories he advanced forty years ago, without ever having made the operation for closure of a lacerated cervix; and, after promulgating such views in his final remarks, frankly admitted he was not a proper judge, because of never having operated, and because of the overwhelming testimony given by so many gynecologists against his "inflammation theory."

In plain Anglo-Saxon, *he renounced his old notions in his last speech*, and arrayed himself on the side of the progressive school of gynecology. I honor him for his candor, and if he has omitted to present a copy of his remarks (when acknowledging his mistaken opinions) to the secretary of the obstetrical section of the Congress, I earnestly beg of him to communicate it to the medical public at his earliest convenience. Very respectfully,

Montrose A. Pallen.

118 Madison Avenue, N. Y., February 11th.

Obituary.

SAMUEL WHITALL, M.D.,

new york.

Dr. Samuel Whitall died at his residence, 607 Lexington Avenue, on the 18th inst., of acute capillary bronchitis, complicated with malarial fever. He was born at Marlton, N. J., August 28, 1840, and graduated in medicine at the College of Physicians and Surgeons, New York, in the spring of 1866. Soon after his graduation he was appointed Visiting Physician and Superintendent of the Colored Home, positions which he ably and conscientiously filled up to the time of his death. In addition to his duties in this institution, he engaged in private practice, and was more than ordinarily successful.

Of an exceedingly frail constitution, he had recently been greatly overworked, and, at the time of his last illness, was so exhausted as to offer but feeble resistance to disease. Probably no member of the profession in the city of equal merit was so little known as he. Naturally reticent and retiring, these characteristics became more marked with increasing years. Although a keen disputant, and an interesting conversationalist, he never mingled in society.

As a medical practitioner he stood in the very foremost rank. His skill as a diagnostician was recognized by all who knew him. He was self-reliant and positive, but his opinions were always based on careful and thorough investigation. His contributions to medical literature, although not numerous, are models of clinical observation.

As a man he was rigidly honorable in all his dealings, and peculiarly sensitive to any infringement upon his rights by others. He was a devoted member of the orthodox Society of Friends, and died, as he lived, a consistent Christian. J. R. R.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 12, 1882, to February 18, 1882.

Campbell, John, Lieut.-Colonel and Surgeon, Medical Director Department of the South. Granted leave of absence for fifteen days from 13th inst. S. O. 17, Department of the South, February 11, 1882.

Gardner, William H., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Concho, Tex. S. O. 13, Department of Texas, February, 6, 1882.

Bartholf, John H., Captain and Assistant Surgeon, Fort Lapwai, Idaho. Granted leave of absence for fifteen days. S. O. 12, Department of the Columbia, January 25, 1882.

Maus, L. M., Captain and Assistant Surgeon. The leave of absence granted him in S. O. 222, A. G. O., October 1, 1881, extended one month. S. O. 36, A. G. O., February 14, 1882.

Banister, John M., First Lieutenant and Assistant Surgeon, Fort Reno, Ind. Ter. The leave of absence granted him in Par. 1, S. O. 18, Department of the Missouri, January 24, 1882, is extended one month. S. O. 16, Military Division of the Missouri, February 15, 1882.

Medical Items and News.

The First Anti-Vaccination League of America met in this city and talked last week.

Deaths from Anæsthetics.—The daily papers of February 16th reported a death from chloroform at Marion, Ohio, and a death, possibly from ether, in this city. The latter case was a patient at the New York Dispensary, who was put under ether in order to return a dislocated shoulder.

Distribution of the Sunday Hospital Fund.—The officers in charge have distributed this year's Hospital Fund as follows: St. Luke's Hospital, $5,000; Mount Sinai Hospital, $3,000; Presbyterian Hospital, $2,900; House of Rest for Consumptives, $2,000; Home for Incurables, $2,000; St. Mary's Free Hospital for Children, $2,000; Home of the Holy Comforter, $1,500; New York Eye and Ear Infirmary, $1,000; New York Infirmary for Women and Children, $1,000; New York Ophthalmic Hospital, $1,000; New York Ophthalmic and Aural Institute, $1,000; Orthopedic Hospital, $1,000; Manhattan Eye and Ear Hospital, $1,000; Hahnemann Hospital, $1,000. The total amount distributed was $25,400.

Further Conclusions Regarding the Iodoform Treatment.—Mosetig-Moorhof, in a recent communication in the *Wiener med. Wochenschrift*, comes to the following conclusions regarding the iodoform treatment: 1. It is almost a specific against local tuberculous processes; 2. Fungous granulations should be removed before it is applied; 3. Iodoform placed upon non-fungous surfaces is the surest antiseptic; 4. It is absorbed and excreted through the kidneys; 5. It excites a painless and rapid granulation process and prevents septic absorption; 6. The heating process is general afebrile; the powder sprinkled on the surfaces of the wound does not prevent primary healing; 7. Drainage is necessary; 8. Redness and swelling occur rarely, and then from retention of secretions; 9. No other disinfectant is necessary; 10. The iodoform treatment is the cheapest and surest of any; iodoform keeps for a year; 11. Iodoform is the antiseptic for operations in cavities—*i.e.*, the mouth, bladder, rectum, etc.; 12. It can be deodorized with tonca bean.

The German Government appropriates this year over $40,000 for the support of medical education and work in the seven universities of Berlin, Königsberg, Halle, Kiel, Gottingen, Marlburg, and Bonn.

The Society of German Surgeons meets this year in Berlin, from May 31st to June 3d.

Obesity in a Child.—Dr. Hillairet exhibited in Paris, not long ago, a girl, five years old, who weighed one hundred and twenty-four pounds, and measured four feet round the waist. The child was healthy in other respects, but somewhat scant of breath.

Trichinæ in German Swine.—The last official bulletins regarding the above make the proportion of trichinosed swine 1 to 1,510.

The Extent and Future Spread of Small-Pox in this country is discussed by Dr. T. C. Minor in the *Cincinnati Lancet and Clinic*. In this country up to November, 1879, there had been very few cases reported, though the disease was widely prevalent in Europe. In 1880 there were, according to Dr. Minor's careful estimates, about 700 deaths from small-pox. Five-sixths of the mortality was in the northeast section of the country. Philadelphia suffering most. During the past year it is estimated that there have been 15,000 cases in the United States, with 4,000 deaths. The cities suffering most have been Philadelphia with 1,319 deaths; Chicago, 822; New York, 453; Pittsburg, 444; Hudson County, 202; Richmond, 144.

Dr. Minor thinks that the disease is travelling west and south, and that before the winter of 1883, Cincinnati, Louisville, St. Louis, Nashville, Memphis, Vicksburg, and New Orleans, will feel the effect of the present epidemic wave.

A Place Where More Doctors are Wanted.—Americans travelling in Italy complain that it is almost impossible to get the attendance of a good physician, especially in the larger cities like Rome and Florence. One American lady, while taken ill with typhoid fever in the latter city, could not secure medical attendance except by the special interposition of the consul.

"Our Continent."—We are pleased to see that Dr. Brinton, the well-known editor of our esteemed contemporary, the *Philadelphia Medical and Surgical Reporter*, has become engaged in a new literary enterprise, a weekly literary journal recently started in Philadelphia, and entitled *Our Continent*.

Alumni Association, Albany Medical College.—The annual dinner of the Alumni Association of the Albany Medical College will take place at the Delavan House, Wednesday, March 1, 1882, immediately after the commencement exercises at Tweddle Hall.

State Emigrant Asylum, Ward's Island, N. Y.—Dr. Alexander Trautman, late Assistant Superintendent of the Northern State Hospital for the Insane of Wisconsin, has been appointed Medical Superintendent of the State Emigrant Asylum at Ward's Island, N. Y.

Premiums on Births.—Brussels gives every mother, not a chromo, but a sanitary tract each time a new baby is born. The effect on the birth-rate has not yet been noted.

Dr. Burq, the originator of metalloscopy and metallotherapy, has been gazetted Chevalier of the Legion of Honor.

Guy's Hospital.—Dr. F. A. Mahomed has been appointed Assistant Physician, and Mr. C. J. Symonds Assistant Surgeon to this institution.

M. Camille Godard has left $20,000 to be devoted to the creation of a botanical garden at Bordeaux, for the use of the Faculty of Medicine. He has also bequeathed an annual sum of $600, for prizes.

New Blood-Corpuscles are now found at the rate of about two a year. The last variety is described by Bizzozero, of Turin. His name suggests oval corpuscles, and such he has found. They are oval, pale, disc-shaped or lenticular, and one-half or one-third the size of the red corpuscle. They

were discovered in the mesentery of chloralized rabbits and guinea-pigs, and may be observed in freshly drawn blood, but rapidly become granular. Professor B. thinks they may contain the fibrin factors thought by Schmidt to be in the white corpuscles.

Mr. Lister has been elected President of the London Clinical Society for the ensuing year.

Pilocarpine has been used without any success in hydrophobia.

Sir Erasmus Wilson has given $50,000 for the purpose of founding a Chair of Pathological Anatomy in the University of Aberdeen.

That Clinical Thermometers may carry disease and ought to be disinfected is the last note of warning from the sanitarians.

Malarial Keratitis.—At a meeting of the Chicago Medical Society, January 16, 1882, Dr. F. C. Holz read a paper on the above subject. He said that in this disease the ulcer of the cornea is raised, and may creep on the entire surface; there is severe pain, photophobia, and lachrymation. It extends for a few weeks, and reparation may require a few months. This takes place through an elongation of the deeper blood-vessels. This ulcer is just as characteristic as the patches found in the mouth in syphilis. Malarial or remittent fever may or may not accompany or precede this affection; as a rule it does, and quinine is especially successful as a constitutional treatment, even after local treatment has failed. Several illustrative cases were reported. Other members of the society confirmed Dr. Holz's views.—*Chicago Medical Journal and Examiner.*

Vaccination after Small-Pox.—Dr. J. W. Collins, of Toronto, Ohio, writes: Having read in The Medical Record of February 4th, Dr. Bristoe's experiment on himself with vaccine virus after having small-pox, and as information on this subject is much sought for by the laity as well as physicians just now, I will state that Mrs. Margaret Kell, of this place, had a severe attack of confluent small-pox in the spring of 1873. I vaccinated her January 4, 1882, and she had all the symptoms of a perfect vaccination. I used virus from the vaccine farm of Johnston Bros., Fox Lake, Wis.

A Non-Odorous Dissecting-Room.—The Boston correspondent of the *Chicago Medical Journal and Examiner* describes at some length the pathological building just finished in connection with the new college building. It is unique in several respects, but chiefly in the fact that there are arrangements for removing all foul gases, and for flooding and cleansing the room whenever necessary. The post-mortem tables are depressed in the centre, where there is a large opening covered with a grating. This leads down through a large porcelain-lined cylinder, which conducts to the trapped opening of a large drain. To secure the escape of the gases there is the following ingenious arrangement:

Some feet down the cylinder, and nearly half way to its lower end, is a large aperture mouthing into a lateral shaft placed just below the floor of the post-mortem room. This shaft runs horizontally, and terminates fifteen feet away in a special chimney, which passes upward through a small room adjoining the autopsy department. In this ante-room is a window let into the chimney. Opening the window, you find in the chimney a series of ten gas-jets. Lighting these, and waiting a few moments for the warming of the air in the chimney, you hold a bit of burning paper over the opening in the table, and are surprised by the force with which the flame is drawn *down* the hopper. And this is the manner in which, during the examination, of a body, gases and odors leave the room, its air remaining pure. The autopsy table is supplied with every convenience to secure cleanliness, a small hose being the chief. The floor of the room is of asphalt, the washboards are glass, so that the whole place is frequently deluged with water, which runs off by means of scuppers and gratings which communicate with the main drain.

Death of a Woman in Puerperal Convulsions from "Fatty Metamorphosis."—Happening in Professor Carl Braun's obstetrical and gynecological clinic, I heard the report of a patient who had died in six days after confinement, from fatty metamorphosis of heart and other organs. She had, in all, about fifty eclamptic convulsions. These came on before delivery, which was effected with forceps, without, however, influencing the spasms. She then had hot bath and purgatives, without effect. Then thirty grains of chloral were given, which checked them for two hours, when they recurred, and the dose was repeated until two drachms had been taken without benefit, or only of a temporary character. Then she was bled several ounces, to have the blood tested for ammonium carb., when the convulsions ceased for several hours, and recurred. The examination did not reveal ammonium carb. The convulsions recurred, and these and other remedies were used, alone and in combination, but the pulse grew weaker and faster until the patient expired. The lecturer remarked that the patient did not die of medicine, albuminuria, septicæmia, etc., but fatty metamorphosis. The lecturer had given up venesection for many years, having no faith in its efficacy. Few patients recover who have convulsions before delivery.—Vienna cor. of *Chicago Medical Journal and Examiner.*

An Application in Small-pox.—Mr. C. W. Thorp writes (*Brit. Med. Journ.*) that he has found the carbolic acid glycerine of the British Pharmacopœia, diluted with four times its weight of glycerine, a most useful application in small-pox. It not only makes the patient less repulsive, but lessens the amount of pitting. It should be applied as soon as the pustules begin to fill, and be continued until they desquamate.

Female Physicians in Russia.—According to a daily journal, medicine is much studied by the middle-class women of Russia. Each year seventy female students are admitted to the medical college, and twice that number apply for admission. The examiners endeavor to stop this over-supply by raising the examination fees and by increasing the severity of the examinations, but the number of applicants increases. Of the 951 female students who have attended the medical lectures, only four have been implicated in political troubles, while of the 281 women who have been graduated, and the 152 who have been permitted to practise, not one has been arrested. During the Russo-Turkish war twenty-five female physicians were sent to the front. Their devotion to the wounded attracted the attention of the late Czar, and many of them were decorated with medals for valiant services.—*Chicago Medical Review.*

A Pathognomonic Symptom of Diabetes.—Dr. Magilot, as the result of many examinations, considers that a peculiar osteo-periostitis of the alveolar border of the jaw is a constant early and pathognomonic sign of diabetes mellitus.

Original Lectures.

THE GENERAL MANAGEMENT OF THE PARTURIENT STATE.

By WILLIAM M. POLK, M.D.,

PROFESSOR OF OBSTETRICS AND THE DISEASES OF WOMEN AND CHILDREN IN THE UNIVERSITY OF THE CITY OF NEW YORK.

(Phonographically reported for THE MEDICAL RECORD.)

GENTLEMEN: If it is asked what is the chief end or principle to be kept in view in the management of a puerperal case, I would say the prevention of puerperal fever. If you can avoid that contingency, nature, under ordinary circumstances, will provide very well for the patient. In order, however, that she may avoid puerperal septicæmia, and return to her usual condition in full health, certain precautions are necessary.

In the first place, in taking into consideration the measures for the proper management of your patient, your precautions should always date back into the pregnant period, for the reason that if she be under your observation during the last two or three months of pregnancy you can so watch over her various functions as to have them all in proper working order at the time of labor, and consequently during the parturient period. According to the old-fashioned way of managing these cases, the physician rarely saw his patient until just about the time labor began; therefore, there might be a number of pathological conditions present, more or less severe, which could but exercise a deleterious influence upon the woman during the parturient period. By careful attention during the last six weeks or two months of pregnancy you may be able to correct various pathological conditions which may be present during that time, so that when labor comes on your patient will be in the very best physical condition that can possibly be attained.

With regard to labor itself, there are certain precautions to be borne in mind having a direct bearing upon the individual's favorable recovery. For instance, in the first, the worst stage of labor, nothing so comforts and aids the woman as properly directed care and sympathy on the part of the physician. It is not necessary to rush into the room, make a vaginal examination, turn around hastily and say to the friends that all is right, and dash out again. You should remain long enough not only to find out the position and presentation of the child, but also to take into consideration the nervous condition of the patient, and to impress upon her mind that she is in the very best possible state for favorable delivery. A great many women approach the period of labor with the feeling that death will surely be the end of their suffering. Now, this assurance on the part of the medical attendant will tend greatly to insure that quiet state of the nervous system of the patient which is so necessary to the most favorable termination of labor. If, however, the mere assertion by the physician, that all is well, is not sufficient to quiet her nervousness, then do not hesitate to employ some quieting remedy, among which I have already mentioned chloral as answering this purpose better than any other. It has a soothing influence upon the nervous system, and acts as an anæsthetic upon the labor pains while perhaps it may have no such effect upon any other portion of the body, and its influence upon the secretions and the system generally is better, in my mind, than that of opium. Fifteen, thirty, or sixty grains may be administered in broken doses, according to the indications of the case; it is unnecessary to mention the size of doses now, having done that at previous lectures. In some cases, as in extreme suffering, it may be preferable to employ opium. Coming to the second stage of labor, if the patient be strong and capable of getting along without an anæsthetic, it is better that she should do so, and I am in the habit of encouraging her to dispense with it unless there be special indications for its use. When chloroform is used, it should be given only in sufficient quantity to give rest and relief from the severe pain from which the patient is suffering. It should be remembered, too, that in cases in which chloroform has been administered there is always a little more risk of post-partum hemorrhage than in those cases in which it has not been employed. There is no question that chloroform, when administered in considerable amount, has a marked tendency to the production of uterine inertia. You will bear in mind, therefore, that while your chief object during this stage is to guard against post-partum hemorrhage, that that should not be the sole object to keep in view, but that contraction of the uterus must be insured after the delivery of the placenta, in order that no clots may form within its cavity. If clots are allowed to form and remain here, they are liable to undergo decomposition, break down, and excite septicæmia. In fact, a blood-clot remaining within the cavity of the uterus and undergoing decomposition, is just as potent to set up septicæmia as is a portion of the placenta under the same circumstances. In order to prevent the formation of blood-clots within the cavity of the uterus you must not only see that the uterus has contracted after the expulsion of the placenta, but that an hour at least after the expulsion of that organ it still remains contracted.

After delivery it is important to see that for the first twenty-four hours the patient's rest is not disturbed by the presence of any protruding hæmorrhoids, this being a time when rest and sleep is most important in the puerperal state.

Make it a rule in every case after delivery to carefully examine the condition of the genital passages, to see how much laceration, especially of the cervix, has taken place. If there be much relaxation of the cervical tissue it may be somewhat difficult to determine to what extent laceration may have taken place. If there be sufficient laceration in the lower portion of the vaginal canal, particularly of the perineum, to require repairing, it should be done at once. You will remember that it is not all cases of laceration of the perineum that require the passage of the silver suture; but having before mentioned the degrees of rupture which require surgical interference, I will not mention them again to-day.

The next question is, how can you secure to your patient, just after childbirth, twelve hours of uninterrupted rest? If she happen to belong to that class of people who are able to set apart a room for the parturient woman alone, I would advise by all means that the new-born child be taken into another room rather than leave it with the mother to disturb her rest. If then there be any disposition to wakefulness give her a dose either of chloral or of chlorodyne, according as the one or the other agrees best with the patient, and leave instructions with the nurse to give another dose if the first one does not produce the requisite rest.

As to the bandage it is hardly necessary to refer to

that again; the nurse will usually apply that under your directions. It should be drawn sufficiently tight simply to give support to the abdominal viscera. You know that when the abdominal cavity has been emptied of any large accumulation, whether it be ascitic fluid, a tumor, or a child within the uterus, there is a relaxation of the vena cava and smaller vessels, and the accumulation of a large amount of blood within them. These patients, therefore, require a support around the abdomen in the form of a bandage, which should be drawn just tight enough to give comfort.

Having observed these precautions, you can take your departure, to return and see your patient again within ten or twelve hours. Before considering the duties which we shall have to perform from this time on, let us cast our eyes over the condition of the various organs of the patient's body during this and the whole of the parturient period. What is the condition of the blood, of the nervous system, of the various secretions, of the uterus, etc.? A proper appreciation of the state of these organs will enable us to direct our treatment more intelligently. Immediately after labor the condition of the blood, of course, differs little from what it was before that occurrence; but within a very short time, within a few hours afterward, it contains a larger proportion of excrementitious material. The large amount of material which before went to the nourishment of the child is no longer used for that purpose, but is turned directly upon the mother's circulation, and as it contains a large amount of fibrin and excrementitious material, it must be gotten rid of by the excretory organs, else it will act as a poison. The state of the nervous system will differ in different patients according to their individual nervous organization. There is always a certain amount of shock consequent upon delivery; the greater the amount of suffering the greater the amount of shock. The shock of labor differs in no respect from the shock which you are familiar with in surgical procedures; of course, however, that of labor, unless after instrumental delivery, is rarely so great as that after severe surgical operations; but it is simply a difference in degree, not of kind. The shock which occurs after a simple labor is usually not sufficient to cause any great amount of apprehension, but that which occurs after graver operations, as version or craniotomy, is sometimes sufficient to terminate fatally shortly after delivery. In fact, a number of cases have been recorded in which the sole cause of death was shock which, as already said, was identical with surgical shock. In most women this condition manifests itself soon after delivery by the following symptoms: restlessness, indisposition to sleep, or rather an inability to sleep; sense of weakness or utter exhaustion. If a woman in this condition be annoyed, say by the crying of a fractious infant, or by the too assiduous attentions of solicitous friends, you can readily see that that condition of nerve-fatigue or exhaustion will be aggravated, and when the proper time for sleep arrives she cannot obtain it; she lies abed with her eyes wide open, the cerebrum perhaps unduly excited from the influence of the various narcotic remedies which may have been administered during labor, as chloral, opium; and now, upon giving these as hypnotics, they may fail to give the patient a sufficient amount of rest and sleep. Such patients are the ones who are liable to pass into a state of puerperal mania. I mention these facts to show that after every case of labor there is a condition of shock in some degree, and you are therefore to give her that attention which will enable her quickly to rally from the effect produced upon her nervous system. Extreme shock, when present, indicated by clamminess of the surface, etc., demands stimulation.

We can derive a certain amount of information respecting the condition of our patients in nearly all cases by studying the pulse. You will find that immediately after delivery there is normally a sinking of the pulse-rate. If during labor the pulse has been, as it so often is, ninety or a hundred per minute, immediately after delivery it will drop to about seventy, sixty, or even fifty. Now the slow pulse, remember, is the normal pulse of a parturient woman, and should you find it persisting at ninety or one hundred you may be sure that something is wrong; if immediately after delivery, it is generally indicative of a tendency to hemorrhage. Therefore it is stated in many text-books, and by many teachers, that when such a pulse is present the patient should not be left for several hours, as post-partum hemorrhage may occur at any time.

The temperature is slightly elevated during labor; a considerable degree of muscular action has taken place, and you know that this tends to increase the temperature (as does all tissue change). After labor, when the patient has entered upon a state of rest, it is natural that the temperature should fall a little, perhaps to half a degree below normal. If it go below that point you may be sure that it is one of the evidences of considerable shock. Where an abnormal degree of shock has not occurred, the temperature will probably remain half a degree below normal for a few hours and gradually return to the normal standard. The temperature of the parturient woman should not normally stand higher during the first two days and a half than from 98° to 99° F. If it go above that point, say to 100.5° or 101° and remain there, you may be sure that some septic element is at work, and act accordingly. I have already spoken to you of the treatment in such a case, and it is hardly necessary to repeat it.

About the third day after delivery there is a tendency to a slight elevation of the temperature, because of the incoming of the milk. In some women there will be no elevation of the temperature at this time whatever; in others, there will be rather a decided febrile reaction. The temperature may rise to 100°, or even to 101°. This, if it be due simply to the incoming of the milk, will subside as soon as the milk begins to flow; if it continue a longer time it is rather an indication of some degree of sepsis also.

A word or two with reference to the secretions in general. They are all increased immediately after delivery. You will find that the skin acts more freely than during labor; the flow of the urine is greater. Possibly the alimentary canal will show a disposition to act; but, although the excretions by way of this channel may be increased, as a rule, there is no outward evidence of this. The tendency after delivery is to constipation. The reason for this apparently is the habit of most women to constipation during pregnancy, and to the fact that as the child's head passes down through the pelvis it produces a certain amount of temporary paresis of the rectum by pressure. Because of this tendency to inactivity of the bowel after delivery, the old fashion was to administer a cathartic in the form of Epsom salts or castor-oil, but the fastidiousness of the women of the present day rather leads them to favor the use of the enema, and since the trouble is chiefly due to inactivity of the rectum itself rather than to other parts of the alimentary canal, this

method of relieving the constipation seems to be the more appropriate.

When you return to see the patient after the first twelve hours, make it your rule, as soon as you have felt the pulse, to inquire as to the condition of the bladder. You will find in not a few cases that there is a tendency to retention, even though labor may have been natural, and it is due to pressure of the child's head upon the bladder or the urethra during delivery, producing temporary paresis. If you find that the bladder has not acted, you must, of course, resort to some means to bring about its activity, for, as is well known, in some of these cases retention continues until the bladder becomes sufficiently distended to reach as high as the umbilicus, and a dribbling of urine from overflow exists. Now, the first thought which will suggest itself to you will be to introduce the catheter, and draw off the water. That certainly is the simplest method, but the bladder is a queer kind of organ, for the reason if once you use the catheter in these cases, the chances are you will have to resort to it half a dozen times in succession. Of course if the paresis of the urethra be complete, you will be compelled to resort to the catheter ultimately, but it will be well to remember the fact that there are one or two other means which may be employed, and enable us oftentimes to avoid the use of this instrument. Before speaking of these means, however, I might say that another objection to the use of the catheter is the fact that it often gives rise to cystitis. It nearly always causes a certain amount of irritability of the bladder, and in certain women it produces a violent cystitis, sufficient to give you a great deal of trouble during the whole of the parturient period.

There is a tendency of the bladder to empty itself at the same time that the rectum does; therefore, it is my rule, on visiting the patient twelve hours after confinement, and finding the bladder has not yet acted, to tell the nurse to administer an enema, using, if necessary, as much as three pints of water, or even four, to be injected slowly into the rectum, so that as much as possible may be retained. When that enema passes away it is found that in the large majority of cases the bladder also empties itself, and when this viscus has once acted in these cases you will find that it will continue to perform its functions normally. In connection with the use of the enema, you can often obtain beneficial results by applying hot cloths or a hot flax-seed poultice over the region of the bladder, which, by its relaxing effects, tends to correct any spasm which may exist and give rise to retention. If these means do not succeed, nothing will remain to be done but to introduce the catheter.

Are any special applications required for the breasts? If the secretion of milk be normal, none. There is sometimes a good deal of fulness about the breasts, occasioning a considerable degree of pain. This is due simply to the extreme congestion of all the lacteal vessels. Where this is very troublesome, you can derive greater relief by warm fomentations than from any other measure. Simply, a piece of hot flannel applied over the breasts and covered by oiled-silk will generally suffice. The normal means of procuring relief is, however, the application of the child to the breast, and in this connection we might speak of at how early a period it is necessary to put the infant to the breast. Some advise never before the secretion of the milk has become established, stating that the child is not likely to receive any special nourishment from the contents of the breast before that period, and that it is merely an annoyance to the mother. But let your rule be to apply the child to the breast as soon as the mother has had an opportunity to rest from her labor; that is, at any time from six to eight hours after delivery. This not only serves to stimulate the secretion of the milk (you know that the law holds good with reference to this secretion the same as with reference to all others, that it is increased by normal stimulation), but it is of actual benefit to the child, in that it derives from the breast colostrum which unquestionably contains certain elements of nutrition, and besides has certain cathartic properties, which, by acting upon the bowels, enable them to get rid of the accumulations of meconium. After the child has once been put to the breasts, it is not necessary to do so oftener than every four or five hours until the milk has become established. That, as said before, takes place about the third day, after which it will be necessary, both for the nutrition of the child and for the benefit of the mother, to let it nurse as often as every two hours, or two and one-half hours. Such should be the rule during the first month of parturition.

While speaking of the secretions and excretions of the puerperal woman, it is proper to refer to the lochial discharge. From the time that delivery is completed, there is for at least the first three or four days a bloody discharge—a sanious discharge, more properly speaking—which comes from the cavity of the uterus. After five or six days this discharge changes color, becoming greenish, and finally yellowish. It retains this appearance in general for the remaining three weeks of the puerperal period; at the end of that time it usually ceases. If the bloody lochial discharge continue for a longer period than five or six days—say for ten or fourteen days—the probabilities are that it is due to some abrasion of the cervix—a laceration, perhaps, from which there is an oozing of blood. Such a condition of things, it is likely, would call for treatment. The normal lochial discharge is nothing more than the detritus that results from the breaking down, so to speak, of the tissues in the womb in the neighborhood of the placental insertion, and is probably derived in part also from the process of fatty degeneration going on in the structure of the uterus itself, due, in other words, to the state of involution, which is nothing more than a fatty degeneration of those structures that were largely developed in the uterus during pregnancy, and which gave to it its size and strength, the muscular structure and structures concerned in the lymphatic circulation, and that of the blood, the veins and arteries, together with a large increase of connective tissue.

At the time of delivery the uterus measures about twelve inches in length, and the thickness of its walls, even at the thinnest part, is a quarter of an inch. Now, when the organ contracts, its size is reduced to about that of the two fists, which, of course, greatly thickens its walls. From this state it must undergo such a change as to become diminished sufficiently to measure only three inches in length, and an inch and a half at most in its transverse diameter. A part of this structure, of course, as it undergoes fatty degeneration or involution, is carried off by the lymphatics and the blood-vessels into the general circulation, and is excreted through the kidneys, through the skin, and apparently also through the alimentary canal. But a certain portion of it unquestionably passes out with the lochial discharge. The relation which the lochial discharge

has to this process is perhaps not unlike that which the expectoration of sputa bears to the resolution of pneumonia. During the first few days this discharge, when normal, has scarcely any odor. After that time it possesses an odor which is not exactly offensive, but which leans in that direction. In some women it may be offensive even as a physiological process, but in the majority of cases it does not become extremely offensive save as an indication of decomposition, and when this is true it calls for the extended use of antiseptic remedies.

Now, how are we to treat this lochial discharge? Are we to allow it to flow unmolested over the genital tract, or are we to make use of measures which have for their object the protection of the genital tract from the evil influences of the decomposing material which it contains? Some adopt the rule of using vaginal injections in every case of delivery; others say that injections should be employed only in cases in which there is decomposition in the lochia, evidenced by the strong odor before mentioned. Now, it seems to me that no harm can come from the employment of the carbolized douche after every case of delivery, provided you take this precaution, to have each patient provided with her own glass tube or nozzle and syringe. There will then, it seems to me, be no danger of infection. The great objection which has been made to vaginal douches is that, as claimed by some, instances have occurred in which the tissues were actually infected by it. But almost all patients are able to purchase a new syringe for themselves, and when this is done there is no danger of infection, if it be carefully washed before using it, so as to get rid of any particles of dirt that may be upon it. Use, then, the douche in every case, commencing say twenty-four hours after delivery. It is rarely necessary to begin sooner than this, because decomposition, except in rare cases, does not take place until the expiration of that period. But if, owing to the season of the year or some predisposition of the patient, you have reason to believe that decomposition will occur, or has occurred before that time, then do not hesitate to employ the douche sooner—even six or twelve hours after delivery. As to the manner of employing this, I have told you already, and it is only necessary to repeat that it is to wash out the vaginal canal and the vaginal portion of the cervix, not to wash out the cavity of the uterus. How to make intra-uterine injections I explained to you when speaking of septicæmia, and it is only in that state that you are to employ them.

What shall be the regimen of these patients? It used to be the plan to put them upon broths and light soups for the first forty-eight or seventy-two hours after delivery, until the secretion of milk had become fairly established. Under, however, a better study of the clinical history of these cases, we are now more disposed to consult the individual fancy and taste of the patient. My rule, therefore, is to say to them: if you care for solid food, take it; if you do not, wait until the desire is upon you. Generally, during the first twelve hours they care for nothing more than beef-tea or milk, with perhaps gruel. After that time, as a rule, they are quite willing to take solid food, and then there is no objection to beef-steak, mutton-chop, or game, or any of the meats which we know to be easily digested. Over-feeding, of course, is to be avoided, as is also starving.

Now, by following out the precautions and suggestions which I have given with reference to the management of the parturient period, taking into consideration the condition of the woman, not merely after delivery, but during and before delivery, I believe that you will do a great deal toward diminishing the mortality of childbirth. It has been estimated, I believe, by one of the best authorities, that one out of every one hundred and twenty women die in labor. In certain other statistics it has been estimated that the proportion of deaths is even greater. Taking now the large majority of these deaths, it is found that they do not come from deformities of the pelvis. They do not come, therefore from what may be called unavoidable conditions and accidents; but the large majority of them do come from avoidable conditions — conditions that can be traced in every case to neglect, either on the part of the patient, on the part of the nurse, or on the part of the medical attendant. This being the case, you see how important it is to attend to all of the little details of which I have spoken in connection with the management of the parturient period.

The average period of time that the patient is kept under observation is about nine days from delivery. I am speaking, of course, of cases in which no complication has arisen. The rule with a large number of practitioners, I believe to be this: they make daily visits, say nine days. If, at the end of that period, the patient is what they ordinarily call well, the lochial discharge in good condition, and all the functions being performed naturally, they dismiss her as cured, and, perhaps, never see her again until, it may be, she comes to engage their services in another confinement, or perhaps for a leucorrhœa, which she thinks is more excessive than it should be. Now, the wiser plan is this: to see the patient for six or nine days daily, see that her condition is what it should be at that period, that she is in a fair condition of strength, the appetite good, the functions being performed naturally. Say to her, however, that I wish to see you about five or six weeks hence, in order to examine the condition of the genital passages, to find out whether there is remaining any laceration of the cervix, and whether the uterus is in a state of subinvolution. By observing this precaution, you will save many a woman from an ache and a pain which can always be traced to the lesion in question, or, rather, which can in many cases be traced to the lesion in question. In this way you, in the first place, assure your patients of your interest in them; and, in the second place, you place it in your power to secure a perfect cure. If you dismiss your patient six or nine days after delivery with the condition I speak of, possibly she will not come back into your hands, but pass into the hands of some specialist, who will call attention, perhaps, to a piece of bungling midwifery, which, of course, will not react very favorably upon your reputation. Now, it is unnecessary to say that the making of these cases of laceration may not be because of any special fault on your part; but that is not so much the point as is the fact that by seeing the woman after five or six weeks you may put her in a position to correct any difficulty that may be present.

These precautions having been taken, it seems to me that you will have done your whole duty with regard to the parturient state.

Four Deaths under Chloroform have been reported recently as occurring in various parts of England.

Original Communications.

EXTRACTION OF TWO PIECES OF GLASS FROM THE AUDITORY CANAL.

Remarks on its Acoustic Disturbances.

By EDWARD S. PECK, A.M., M.D.,
visiting surgeon to charity hospital.

In September, 1880, a gentleman, thirty-nine years of age, was sent to me with the following aural conditions: The left auditory meatus was so swollen that a surgeon's probe could not be made to pass the constriction, except with difficulty. The pain in the ear was deep, and so severe that the patient got but little sleep; there was a constant throbbing synchronous with the pulse at the wrist—evidently the pulsation of the carotid artery; and a thick, not free, discharge. In addition, patient complained of a very unpleasant sensation of fulness and pressure, anterior to the tragus, from which he tried to get relief by a series of efforts of mastication, grinding of the teeth, and gaping. The ante-aural portion of the face was swollen as far as the temporo-malar articulation, and was painful on pressure. On examination there were two scars running vertically across the zygoma—one an inch, the other one and one-half inch long; the higher curve of the helix of the ear had been cut, and had healed by vicious union, so that the normal curve was broken, and granulation-tissue had overgrown the wound. There was, in addition, a vertical cicatrix, one inch long, over the mastoid region. Functional examination proved the patient so deaf in this ear, that my watch—heard at twenty-four feet with one ear in a large office at the rear of the house, furnished with book-cases, table, desk, chandelier, etc.—was not heard by the patient on firm contact with the ear. Laid over the temporal region, the watch was heard very faintly, while the ticking was not recognized over the mastoid. [It is a well-known fact that all soft fabrics used in furnishing, projecting furniture, many and large windows, and the distance of the examining-room from the street, are essential factors of disturbance of the wave conduction of sound, and by so much they change the pitch and the quality of its register.] The gentleman alleged that about one month ago he stepped from a horse-car under the Chatham Square Elevated Railway station, where it is usually dark, and where are a number of fluted iron columns supporting the structure. Wishing to retrace his steps in order to make the sidewalk, he turned about quickly, and struck the side of the face and head violently against an upright column, committing the damage described. The severe otalgia and otorrhœa began about five days previous to his first visit, or nearly four weeks after the injury. A diagnosis of traumatic suppurative inflammation of the external meatus was made, about whose symptoms there was the manifest incongruity of a late development of pus. The history of the case would preclude the supposition of a foreign body. Very hot water was ordered to the meatus in continuous stream, from the Fayette douche, until the pain ceased, after which a hot solution of sulpho-carbolate of zinc, gr. x. ad. ʒ j., was instilled. In a few days the severity of the otalgia had passed away, there was less discharge, and the infiltration had somewhat subsided.

By lateral pressure of a probe the drumhead could be seen complete in its two post-malleal quadrants. On a careful examination with the probe bent at the point (the ear being thoroughly clean), a *foreign body* was felt, evidently thin and brittle, as the tone communicated to the ear of the operator was resonant and of a high pitch. It could be but one of two things: either an exfoliation of part of the auditory process of the temporal bone, or a foreign body, with the larger probability of the latter. [Caries of the external plate takes place here, as elsewhere in the cranial tables, by slow and progressive disintegration. One finds now large, now small roughened masses of the spongy diploë, or very small granular débris, when caries is established. A true exfoliation of the processus auditorius in whole or in part is uncommon. Occasionally a flat or bevelled speculum of bone finds its way out of the meatus, as a result of necrotic changes; but this is not the rule. In those rare cases of spontaneous exfoliation of the bony structure of the ear, the cochlea has been the most frequent sequestrum. In Agnew's case,[1] the lamina spiralis of the right cochlea, with two semicircular canals, formed the sequestra. In Gruber's case[2] both cochleæ were separated by exfoliation after scarlet fever, in a lad of seven years. Toynbee[3] reported two cases of exfoliation of the cochlea of one side. Sir Philip Crampton[4] removed a piece of loose bone from the meatus of a young lady, which proved to be the whole internal ear, consisting of the cochlea, vestibule, and semicircular canals, with a small part of the inner wall of the tympanum. Gruber[5] removed exfoliations of the mastoid and squamous portions of the temporal bone; Toynbee,[6] the major part of the petrous portion; Boeck,[7] a necrosed bit of the meatus; Michael[8] describes and illustrates a sequestrum of the inner wall of the tympanum and of the mastoid process, which had fallen out while the child's ear was syringed at home; while Lucæ, Ménière, Patterson, Cassels, Jacobi, and others, have reported cases of neurotic exfoliation of larger or smaller parts of the bony structure of the ear.] I then introduced an angular aural forceps, and succeeded in removing a wedge-shaped piece of *glass*, 5 mm. long and 3¼ mm. broad. This had been lodged five weeks in a crypt of the superior wall of the auditory canal, in the subcellular tissue of the integument. This crypt was situated just within the isthmus of the canal, or at an approximate distance of five-eighths of an inch from the external world. Believing there was more glass in the ear, a flat, blunt curette, with large curvature, such as is used by oculists, was introduced into this sinus, and there was removed, after some minutes, another and larger wedge-shaped bit of glass, measuring 10 mm. (1 ctm.) in length and 2½ mm. in breadth. A look of inquiry and surprise on my part elicited the following confession: Patient did not run against the pillars of the Elevated Railway, as alleged, but, in a dispute at billiards, was struck violently across the zygoma, ear, and mastoid region with a beer-glass, held in the hand of his assailant. The glass was shattered into fragments, and the wedge-shaped pieces were either from the angles at its sides, or from where the

[1] The American Medical Times, vol. vi., No. 16.
[2] Arch. f. Ohrenheilk., Bd. IX., pp. 238 et seq.
[3] Ibid., Bd. I., p. 115.
[4] Wilde's Aural Surgery, p. 376. 1853.
[5] Wiener Medicinalhalle. 1863.
[6] Arch. f. Ohrenheilk. Bd. I., p. 117.
[7] Ibid., Bd. IX., pp. 238 et seq.
[8] Arch. of Otology, vol. ix., No. 3, p. 222. Translation.

handle joins the glass. In a few days hearing was partially restored, equal to $\frac{2}{5}$ by the watch, or 33 per cent. The pulsating, swashing sound abated, but persisted to such degree, at the time of his discharge, October 19th, as to annoy him, particularly at night. Patient was engaged in the manufacture of pianos, and devoted part of his time to the detection of chromatic aberrations of tones in the different registers. This accident interfered with his acuteness of hearing, both by a diminution of the number of sound-waves (interference in pitch) and by the quality of timbre, so that the patient had confused perception of tone (paracusis monauralis, Knapp), and failed to catch the *nuances* of the higher notes, to which his ear had by practice become nicely adjusted.

35 West Thirty-eighth Street, January, 1882.

TREATMENT OF FRACTURE OF THE CLAVICLE WITHOUT APPARATUS.

By R. C. NEWTON, M.D.,

ASSISTANT SURGEON, U.S.A.

A case of fracture of the clavicle has recently come under my notice, which, so far as the treatment and result go, may prove of interest.

W. P. S——, a private of I Troop, Fourth U. S. Cavalry, aged twenty-eight, medium size, healthy, while on detached service, was thrown from a horse, and sustained a simple fracture of the left clavicle, at the junction of its middle and outer thirds.

The man did not wish to "go on sick report," and so essayed to treat himself by simple embrocations. On January 15, 1882, however, he sought advice. This was on the third day after the injury. Dr. Elbrey, U.S.A., post-surgeon at Fort Union, N. M., where the accident occurred, saw the case. On the following day the doctor made out the fracture, and put it up firmly, using bandages of adhesive plaster and a pad in the axilla. On the day after (January 17th) the patient set out on horseback for Fort Stanton, N. M., a distance of over two hundred miles. The dressings upon his arm annoyed him in riding, and on the fifth evening he removed them. This was the ninth day since the accident, and the sixth since the application of the bandages. After this he continued his journey as before. He merely favored his left arm by carrying the hand in his breast as he rode; he did not use a sling.

On January 28th he reached Fort Stanton. On January 29th his name was entered on the sick report, but he did not present himself until the following day, as he did not consider his trouble serious, and only complained of pain in the seat of fracture upon exertion.

On January 30th he was carefully examined. A large deposit of callus marked the point of fracture. The fragments were, however, in good apposition, and union was complete. To-day (February 4, 1882) he is doing light duty, *i.e.*, is excused from heavy labor. He expects to do full duty in a few days. He complains of a "stitch" near the point of fracture on riding a horse, and that the motions of his left arm are somewhat restricted. This result, twenty-three days after the fracture, seems remarkably good.

This history has suggested two or three questions to me:

First.—Has not this case made a good recovery without any treatment that we have been taught to consider at all adequate? For, as I have always believed, the bony fragments were no more in a condition to go without support on the ninth day after the injury than on the second. Probably he instinctively carried his arm in such a way as to cause the least pain, which, no doubt, was the best position for it to take.

Second.—Did not this result come about under very unfavorable circumstances? The patient rode on horseback over two hundred miles, slept on the ground, etc.

Third.—If both these questions be answered in the affirmative, why not throw away and condemn to oblivion the majority of the complicated and confusing apparatuses for the treatment of fractured clavicle, which are described in our text-books, and allow the embryo surgeon to burden his mind with something simpler than descriptions of the marvels of ingenuity referred to?

Of course, it cannot be denied that treatment, though brief, may have had some effect. But it seems to me that we are justified in estimating this effect as quite inconsiderable, and in asserting that there is at least a fair probability that the result would have supervened had no treatment been made use of.

Fort Stanton, N. M.

THE OBSTACLES TO THE ABOLITION OF MECHANICAL RESTRAINT IN OUR INSANE ASYLUMS.

By JOHN S. WOODSIDE, M.D.,

MEDICAL SUPERINTENDENT HOSPITAL FOR INCURABLES, FLATBUSH, L. I.

Before considering the obstacles to the abolition of mechanical restraint, let us see if it is a fact that restraint *is* used to excess in the asylums of this country. Dr. H. B. Wilbur has tabulated returns from twenty-six of our asylums which settles this question conclusively. Let it be noted that these returns are from the superintendents themselves, in answer to a circular letter, who would certainly be the last people in the world to exaggerate the amount used. The table shows that in 26 asylums, containing 13,967 patients, restraint was used on 5,089 occasions during *one month*. Taking this as the average, we have 61,068 during the year; in other words, in only 26 out of 88 asylums almost as many applications of restraint as there are patients in the whole country. Whereas the report of the English Lunacy commissioners for 1880 shows that in 29 English asylums, with an insane population of 17,756, restraint was not used once during *a whole year!* By another comparison, Dr. Wilbur shows that the majority of individual asylums in this country use more restraint than is used in all the county and borough asylums of England collectively, containing on an average 38,000 patients! A few months ago I visited a State asylum containing about 500 patients, with apparently ample facilities for their proper treatment, and found the following condition:

The assistant physician was starting on his morning rounds, carrying a stout hickory walking-stick, which he seemed to think necessary for self-protection, and he led me through a scene that only required some burning brimstone and the gloom of night to convert it into a veritable hell on earth. Straps, belts, handcuffs, chains, and camisoles dangled from numerous pegs in passageways and halls, convenient for emergency. Instead of the minority of the patients being in restraint, it appeared to me

that the majority were. They were seen lying curled up in all sorts of places and positions, some wearing wristlets fastened by a chain to their ankles, or with wristlets merely and fastened to the chair or bench on which they were sitting by the belt, others walking around in camisole or with hands confined to a chain or belt around the waist. One poor creature was lying quietly on his back, wearing iron anklets from which a short chain extended to be hitched to an upright post. It was almost impossible for him to get on his feet, or if there, to remain so long. The two "worst" characters were confined in a small compartment about fourteen feet by six feet. One burly fellow wore an iron or steel collar, from which extended a chain to another chain around his waist —his hands also being fastened to this iron belt— and thence stretched to be attached to a heavy pair of iron anklets. This chain extending from the collar to the anklets was so short that if the man could stand at all, it could only be in a crouching position. He was lying doubled up on the floor when I saw him. From the central chain around his body one proceeded, about three or four feet long, to a staple in the masonry of the wall. His companion was similarly caparisoned, but he did not suffer the ignominy of being chained to the staple like a dog.

When we know that such a condition as this exists in *one* State asylum—in how many more we know not—is it not full time that the non-restraint system should receive careful consideration and honest trial by those who are suitably situated to do so, instead of their supercilious sneers?* Enough for the *existence* of restraint.

The chief obstacles in the way of the extension and application of non restraint in the asylums of the United States to-day is not to be found in the character of our patients as alleged, but in the character of our superintendents. When asylum superintendents cultivate sufficient independence to enable them to cease to be political and social sycophants, to aim at being more scientific physicians, and to take a look at the question from the broad platform of humanitarian justice to the most unfortunate class of their fellow-beings in existence, then, and not until then, are we to expect the attainment of that enlightened course of action which the best instincts of the best men of past and present times have been striving for. There are a few estimable superintendents who are actually in favor of non-restraint, but who permit themselves to be classed in the opposition, thinking that otherwise they commit themselves to an absolute policy, and by so doing they lend the prestige of their names to bolster up and continue a record of the most abominable and systematic cruelty.

The revered Connolly, after seven years' experience with absolute non-restraint, lays down the following conditions as essential to its being properly carried out: "One of the first of these is a properly constructed building, in which the patients enjoy the advantages of light and air, a cheerful prospect and ample space for exercise, and of classification, and of the means of occupation and recreation. The next is the constant and watchful superintendence of humane and intelligent officers, exercising full, but considerate and just, control over an efficient body of attendants" (Memoir by Clark, p. 32). Now, the first of these essentials is to be found, at least at every State institution in this country, and in all the large private corporate institutions, but the second qualification seems to be sadly lacking. When restraint is the order of the day in such institutions, the blame rests solely with the superintendents, not on the character of their patients, whom they would fain make us believe are of such a high-strung, independent temperament, as compared with their Saxon cousins in England—are so impressed, before becoming insane, with the free and reckless spirit of republican liberty, that it is necessary to apply the soothing camisole, to quiet them with the click of buckles and the clank of manacles! Very appropriate treatment, is it not, for a free-born man, whose will-power is weakened by disease, but who is capable of reasoning with more or less acuteness, on the first evidence of an excitement which he is unable to control to be violently laid hands on and pinioned like some vile criminal, without a word of advice or reason, or the least notice taken of his remonstrances? It seems to me there are many physicians who labor under the mistaken impression which awes the heart of the laity, that every insane man is a madman without "rhyme or reason," whereas the fact is such cases are exceptional. The large majority of insane patients can be advised and reasoned with. It is this course of unreasoning stupidity which keeps some of the wards in our asylums howling pandemoniums.

There seems to be an unreasonable opposition on the part of superintendents to the acceptance of the *principle* of non-restraint, for, while even the most mechanical among them will admit that the *least* amount of restraint is the *proper* amount, they will not carry out the result of their own reasoning, and permit it to convince them of the practicability of none at all. There is only one way of practising non-restraint, that is, by abolishing all tempting appliances, and giving it an honest, energetic, and rigid trial. A tippler who wants to refrain from drinking keeps no liquor in his house. I may here note the salient features of the introduction and continued practice of this system by Dr. J. C. Shaw, at the Kings County Asylum. Restraint was first reduced gradually and carefully, until Dr. Shaw became convinced that it could be entirely abolished. He then issued his order, "Let there be no restraint," and there has been none since.* We all knew—assistants and attendants—that the doctor meant what he said; if we didn't like it, we knew the alternative. Consequently every one did their best, and we soon found that the difficulties were chiefly in our own minds.† In this manner—and in this way alone, in my opinion—can non-restraint be introduced and carried out. It depends on whether the superintendent is in earnest or not, whether he is willing to sacrifice his own prejudices and comforts for a conscientious trial of a system which the ordinary dictates of humanity recommends, the scientific world approves, and ample experience has shown to be feasible. The principle of restraint cannot be used without being abused. Excess creeps in so insidiously, there are so many sheltering refuges for it to lurk under, that the only safety is the principle of non-restraint, and those who practise it honestly will not find themselves often compelled to break the rule.

There is a prevailing impression among those who have no knowledge of practical non-restraint that

* I do not mean to say that the above condition is common in our asylums, but is it not a frightful fact that such is to be found in a few instances? The case described is not the only one.

* All the restraining apparatus in the asylum was burned up, so that there was no temptation from that source.

† For details, see article by Dr. Shaw, in Proceedings of Eighty-seventh Annual Conference of Charities, 1880.

there really can be no such thing, that those who claim to practise non-restraint are merely substituting one form of coercion for another, and they ring in harangues, with amusing absurdity, about "muscular force," "chemical restraint," "cell-seclusion," etc., when the real fact is that, with the abolition of mechanical restraints, accompanied by absolutely necessary judicious management, the cause for such is also abolished. Arbitrary conduct on the part of attendants is the chief cause of violence among the patients; the more coercion used the more is needed. The independent Yankee spirit, which brooks no interference, is not subjected to the hug of muscular attendants; but, by giving him the greatest amount of liberty possible, by kind, yet firm discipline, judicious therapeutics, out-door exercise, and, finally, what cannot be laid too much stress on, a suitable classification of patients to attendants, he is led to conduct himself in as orderly a manner as can be expected. Because a man breaks a window, knocks down another patient or a nurse, tears his clothing, or insults the physician in charge, is no reason why he should be grabbed and stuffed into a camisole for days and weeks, often months and years, following. The act is but the impulse of the moment, is not remedied by such a procedure, but, instead, it adds a new and personal grievance, to be revenged at the first opportunity. Some of the old attendants have frequently made such a remark as the following to me: "Isn't it queer, doctor, that we don't get any of the 'tough nuts' like we used to have." The "tough nuts" are the product of restraint and harsh treatment.

Some idea can be had of the methods of managing the insane without restraint, if we but think of the numberless subterfuges which are necessary in the management of equally irresponsible individuals—babies. They denude their bodies of clothing, they break and smash and tear everything within their reach, they are filthy in their habits, they refuse to eat what is offered them, they are noisy and obstreperous, but who would think of mechanically restraining a baby? Some bad mothers do use sedatives to get rid of the trouble and bother, and some bad superintendents of insane asylums do use restraint in the treatment of their patients for the same reason. "Restraints and neglect may be considered as synonymous; for restraints are merely a general substitute for the thousand attentions required by troublesome patients" (Connolly).

Dr. Wilbur, in the article already referred to, conclusively shows that in the Scotch, English, and American asylums where mechanical restraint is least used, there also the use of sedatives and narcotics are at a minimum. The diminution in the quantity of these drugs found necessary after the abolition of restraint in the Kings County Asylum was very marked.

He also shows that suicides are four times as common in an American asylum population of seventeen thousand patients, protected by all the ingenious paraphernalia of mechanical appliances, as it is in an insane population of 43,000 in England, where non-restraint is the order of the day!

I may state that in this institution, where, on an average, eight or ten straight-jackets were in use daily until last July, when Dr. John A. Arnold took charge, they have all been abolished by the doctor and myself, without much trouble, and non-restraint is now practised. There are at present three hundred and thirty eight patients, chronic, incurable cases, with a good sprinkling of epileptics. The building is poorly adapted for carrying on the system, as the grounds are very limited, the building much overcrowded, and all the patients have to sleep in common dormitories, there being no single rooms.

"The infliction of mechanical restraint demoralizes those who use it and those who suffer it, giving rise, in the long run, to negligence and brutality in the former, and to dirty habits, noise, and excitement in the latter" (Lochart Robertson).

"I certainly do not hesitate to express a strong personal conviction that the use of mechanical restraint in any asylum, public or private, is an indication of a badly managed institution" (Maudsley).

January 31, 1882.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

SERVICE OF JOHN ASHHURST, JR., M.D.,
PROFESSOR OF CLINICAL SURGERY.
(Reported by GUY HINSDALE, M.D.)

EPILEPTIFORM CONVULSIONS FOLLOWING LIGATION OF THE CAROTID ARTERY.

I TAKE the opportunity to-day of showing you a patient more for what has been done than for what you can now see. This young man received, nearly a year ago, a stab in the neck, where you see this deep scar. He did well for eleven days, when a profuse secondary hemorrhage occurred, and was several times repeated. I was asked to see him, with a view to adopt permanent means to stop the bleeding. He was too ill to be moved; the weather was intensely hot; he was blanched and puffy under the eyelids from the loss of blood, and the only course which offered a prospect of success was to tie the left common carotid artery.

I had the assistance of Dr. J. W. Taylor and Dr. David Merritt, under whose care the patient was. The operation was a very difficult and a very trying one. In this manner the hemorrhage was effectually controlled. He was lying on the floor, and it was not possible to raise him even to the bed. The scar on the inner side of the sterno-cleido-mastoid muscle marks the line of incision. Convalescence was slow, the ligature not coming away for six weeks. After this a salivary fistula formed, but Dr. Taylor has succeeded in getting that well by the use of cauterization and pressure. Subsequently the patient lost his voice; six weeks ago, however, it returned, but only in whispers. A laryngoscopic examination, Dr. Taylor tells me, has been impossible, because of the stiffness of the patient's jaws.

On January 2, 1881, the patient had what his friends describe as a fainting-fit, followed, on March 15th, April 29th, and once during the present month, by similar attacks of unconsciousness. These fits last from five to fifteen minutes, during which his eyes turn up and his hands and feet are moved. The last of these epileptiform attacks came on while he was playing ball, unconsciousness continuing for ten minutes, and being accompanied by stertorous breathing. He did not bite his tongue.

I think the curious feature of this case is that these attacks should occur six months after the operation. We are apt to have, after ligation of the

carotid, somnolence and sometimes convulsions, due to cerebral anæmia, from the cutting off of the blood-supply. But in this case there appears to have been some more permanent change in the brain, manifesting itself by disturbed innervation when the patient is subjected to excitement.

TRACHEOTOMY IN A CASE OF LARYNGEAL ENCHONDROMA, with remarks by Prof. Pepper upon the post-mortem specimens.

In performing this operation, great care must be exercised not to injure important structures in the neighborhood of the trachea, and, in order to avoid risk, I prefer that the patient should be thoroughly etherized. It occasionally happens, however, as in some cases of croup, that the patient is already unconscious, and then ether is not needed.

I prefer to stand behind the patient, whose head is made prominent by means of a thick roll placed under it. I make an incision strictly in the median line. One of the most important things is to have the head firm, so that it cannot be twisted out of position. In dividing the subcutaneous fat and areolar tissue, care should be taken to avoid any superficial veins; then cautiously separate the sterno-hyoid and sterno-thyroid muscles, using either the handle of the knife or the director. The trachea will then be exposed.

It is always best to arrest all bleeding before opening the trachea, for if blood should enter the air-passages it might complicate the operation very much. I can understand that, in some urgent cases, it may be necessary to open the trachea before the bleeding can be entirely arrested; but in such a case as this we should proceed cautiously. I always like to see the trachea white before I make the final incision. This last step is accomplished by drawing forward the trachea with a tenaculum, then, thrusting in the knife, edge upward, the necessary number of rings are divided. The tube is then at once introduced.

The operation is a very simple one when you go about it slowly and cautiously, taking care to see the trachea laid bare before making any opening through its rings. Warm weather is favorable to this operation. In winter especial care should be taken to have the patient in an atmosphere of uniform warmth. One of the most frequent causes of fatal termination after tracheotomy is pneumonia.

At the hospital clinic, one week later, Professor Pepper, under whose care the last patient had been previous to the operation, informed the class of the fatal termination of the case, and presented specimens for examination.

Professor Pepper said: The patient who was the subject of my lecture last week, and upon whom, at my request, Professor Ashhurst performed tracheotomy, died of double pneumonia on the sixth day after the operation.

I think the rapid termination of the case is partly due to the violent atmospheric changes of the past week. On Tuesday and Wednesday the temperature was terrific—away up in the nineties, and then came the sudden change; the mercury falling to fifty in a few hours. Within twenty-four hours he began to have a feeble, flickering pulse, and there were evidences of solidification of the posterior portions of his lungs; he became cyanotic, and in two or three hours died.

In children this fatal result after tracheotomy is much more common in cases even where there is no blood-dyscrasia. In the adult, the mortality after tracheotomy is small. But in this case we look to several things. The man was in an exhausted state. It may be that it would have been better for him to have rested in bed for a few days. His prolonged illness and anxiety, his long journey to the city with his lungs deprived of their proper exercise, and supplied with only half the requisite amount of air, lessened his vitality. Prostrated, he was subjected to frightful heat; then came the sudden atmospheric change; the mercury fell forty degrees; he sank immediately, and never for one moment reacted.

The specimens which I present show that the mucous membrane is healthy at the point of operation, the aperture was large enough for the tube and the edges of the wound are not inflamed. The obstruction was even greater than we supposed. The tumor is on the right side of the larynx and attached by a broad base. The left side is free, so that the vocal cord moved freely.

The tumor is an enchondroma, a typical specimen, organically connected with the thyroid, cricoid, and arytenoid cartilages. It is a rather rare form of laryngeal tumor. You will notice that it is a slightly nodulated projection, filling up the right side of the opening of the larynx, and extending over toward the left, leaving only a narrow, crescentic chink, through which the patient was able to breathe. It does not extend down into the trachea; it does extend along the posterior portion of the larynx. The growth is an inch in diameter. During life the left vocal cord was seen to move; it was not affected. It is evident that nothing less than the extirpation of the entire larynx would have sufficed for the removal of the growth.

On examining the lungs we find that the patient has had an old local alveolar catarrh. There are small calcareous nodules through both apices. These are the remains of cheesy matter, and when I pick them out, you notice the little fibrous sac in which they are imbedded. The organic part of the exudation has been removed, and the small, calcareous nodule remains, with a layer of thickened, puckered, and indurated tissue surrounding it. It is a case of imperfectly cured catarrhal pneumonia. Below, we come to the evidences of croupous pneumonia. The lung is dense, solid. I squeeze it and no air escapes. A piece of this lung would sink in water. It is an excellent example of red hepatization. The lung-tissue is softened and tears readily, as you see. The vesicles are filled with an exudate. The posterior portions of the lungs are in only the early stages of the process—there is intense engorgement. The color is mottled, and, as I cut the lung, I find it heavy. There is scarcely any crepitation; nevertheless pieces float in water. It is not true hepatization, but only an inflammatory engorgement, and was associated with the true crepitant râle. The calcareous nodule has nothing to do with the laryngeal condition. It is latent. The capsule is dry, and contains nothing but a gritty lump. It is as harmless as an encysted pebble stone, and yet, in an earlier stage, prior to the removal of all the organic matter, it is a condition which will give rise to phthisis. These local alveolar catarrhs are very common, and, in delicate persons, whose lungs are unable to fortify themselves against the foreign body, the process will not tend to become limited, but ulceration takes place and softening of the lung follows, with the formation of a cavity.

In the case before us, however, healthy inflammation occurred, giving rise to good lymph, which formed a perfectly impermeable sac; the liquid was

gradually absorbed and, as it disappeared, the surrounding envelope became contracted and puckered from its occupying a smaller space.

This condition did not give the patient any trouble; for all that he might have lived to be a hundred years old. But when it became necessary to perform a serious operation, the shock to the exhausted system and the subsequent intense atmospheric changes induced first congestion, then red hepatization of both lungs simultaneously, and the patient passed away easily and unconsciously.

Progress of Medical Science.

An Experimental Research on Tuberculosis.—After a series of experiments on the true nature of tuberculosis and its products, Dr. C. Robinson has arrived at the following conclusions:

Tuberculosis artificially produced in animals is not due to a specific virus.

To produce tuberculosis in animals inoculation with tubercular matter is not necessary.

Failures to produce tuberculosis by inoculation with substances other than tubercular are in the same proportion as failures with true tubercular matter.

The introduction under the skin of any foreign substance capable of exciting an inflammation, or any traumatic injury, can produce tuberculosis, provided the animal is of scrofulous habits.

Scrofulosis in animals is expressed by an inflammation, terminating in the production of a cheesy mass.

Animals not generally scrofulous (cats and dogs) may become so, and then only tuberculosis can be produced in them.

Miliary tubercles are simply aggregations of cells of any simple, ill-nourished granulation tissue compressed into small nodes. The arrangement into nodes represents a true ante-mortem act of cells, to which any young inflammatory connective tissue is liable.

Under favorable conditions of nutrition, tubercles in animals may undergo a higher organization, becoming converted into small, harmless fibromata.

Tubercles artificially produced in animals are histologically strictly identical with those occurring in man. — *Philadelphia Medical Times*, December 3, 1881.

Dowell's Method for the Radical Cure of Hernia.—For the performance of this operation only a needle and ligature are required. The needles are curved and double-pointed, with an eye at either extremity, and are about three inches long. The ligature passes through both eyes. Let us suppose a patient before us and the operation to be upon a left inguinal hernia. The surgeon, standing at the patient's left, explores the condition of the external ring by invaginating the scrotum with the left forefinger. The needle is now entered directly over the ring, carried into and along the superficial fascia, and drawn out at the outer border of the ring. It is now pushed forward until the terminal end has disappeared at the point of entrance. The left forefinger again invaginates the scrotum and is carried to the entrance of the ring, where, by its presence, it can feel and guide the needle, which is now reversed in its course and directed through the external pillar, through the neck of the hernia, through the internal pillar, and made to reappear on the internal line. The third step is now to withdraw the needle at the inner line until its point has escaped the internal pillar, when the needle is again reversed, carried to where it originally entered, *i.e.*, directly over the ring, and then entirely withdrawn. It will thus be seen that the needle has entered directly over the point of rupture, traversed both pillars and the neck of the hernia, and reappeared at the point of entrance without having been entirely withdrawn.—*Annals of Anatomy and Surgery*, December, 1881.

Injuries to the Head.—Dr. John C. Schapps, in reporting twenty cases of injury to the head, gives the following summary: Injuries to the head are serious, not in proportion to the amount of damage suffered by the skull, but more nearly to that experienced by its contents. The injury to the intracranial tissue may be produced by the same force, at the same time as that injuring the skull, as rupture of a vessel may be occasioned by the same force that causes a fracture. The injury may be in consequence of that to the bone, as, primarily, laceration or compression of the membranes and brain by a fragment of bone; secondarily, by the intervention of inflammatory processes, as meningitis, caused by an irritation from abnormal conditions of bone. It may be partly concomitant with that of the bone and partly caused by it, with or without the intervention of inflammatory action. It may occur without any injury to the skull, as intracranial hemorrhage, or meningitis following a blow upon the head.—*Annals of Anatomy and Surgery*, December, 1881.

The Localization of Atrophic Paralyses.—After presenting a series of interesting cases of muscular paralysis and their spinal localization, Dr. David Ferrier (*Journal of Neurology*, vol. iv., No. 3) makes the following statements on progressive muscular atrophy. "The commencement of muscular atrophy is usually in the intrinsic muscles of the hand, and according to most observations, in the ball of the thumb and first interossei. From the hand it spreads to the muscles of the forearm, specially affecting the flexors and pronators, and relatively sparing the extensors and supinators. This mode of advance is precisely in accordance with progressive invasion of the spinal segments, corresponding to the first dorsal and eighth cervical roots. Though the extensors, and particularly the extensor ossis metacarpi pollicis, are more or less implicated, yet, even when the atrophy has advanced to almost complete disappearance of the intrinsic muscles of the hand and long flexors, the extension of the wrist and fingers may be carried out with considerable force. Though, as has been stated, the extensors, as being synergic with the intrinsic muscles and long flexors, are represented in the eighth cervical segment, yet, as they are again represented in the fourth and fifth cervical segments, they will naturally retain considerable power so long as these segments are intact. But when these are invaded, entailing atrophy also in the deltoid and other muscles of the upper arm, the extensors also waste, and the characteristic '*main à griffe*' does not occur. The escape of the supinator longus, relatively more striking than that of the extensor group, is also readily explicable by its representation, along with the flexors of the forearm, in the upper two cervical segments. The supinator longus should, according

to these data, go with the flexors of the forearm, deltoid and other muscles of the upper arm, and of this association there are many examples already on record.

"It has been remarked by Duchenne that the triceps is the last muscle to be affected by muscular atrophy. This is also in accordance with the position and representation of this muscle in the various segments of the cervical enlargement. Being represented in the eighth, seventh, and sixth cervical roots, and more frequently than any of the other muscles which have their centres here, it is natural that it should retain its functional activity and nutrition in some degree, till the whole of this region has become invaded. And as it seems to be the rule for the degeneration to proceed either from the lower or upper end of the cervical enlargement, or it may be from both simultaneously, the centres for the triceps will naturally be long in being completely involved. The order in which the muscles are successively attacked by progressive atrophy is thoroughly in harmony with the mode of collocation and order in which they are represented in the spinal segments, and with the advance of a degenerative process in the multipolar cells of the anterior cornua from below, upward or above, downward; whereas it is altogether impossible to reconcile the facts with Friedreich's hypothesis of a primary myositis spreading merely *per contiguitatem* and limited by the large joints. Friedreich's view that the changes in the anterior cornua, which have been found in a certain number of cases, are merely secondary to the degeneration primarily originating in the muscles, so far finds support in the apparently demonstrated absence of morbid changes in the spinal cord in other cases. But we have good reasons for believing that, in future, cases of muscular atrophy without changes in the anterior horns will be less frequently recorded than heretofore, if the various segments of the spinal cord are investigated with the requisite [illegible] of [illegible] and minuteness."—*Brain*, vol. iv.

Cranial Osteophytes in [illegible].—At a meeting of the Medical Society [illegible]ion, held November 28th last, Dr. Crocker exhibited an infant, eleven months old, with symmetrical osseous thickenings each about one and one-half inch in diameter, and located on the frontal bone. The anterior boundaries of the fontanelles were thick, but the posterior were thinner than normal, these latter conditions pointing to the possibility of an intermingling of the two affections, rickets and syphilis, since in the latter the edges of the fontanelles, as described by M. Parrot, are nodular and thickened, while in the former they are thin and shelving.—*Lancet*, December 10, 1881.

Anæsthetics from a Medico-Legal Point of View.—The following conclusions, presented by Dr. J. G. Johnson, of Brooklyn, are worthy of careful consideration, as they involve questions that have an important bearing on the practical relations of patient and medical attendant:

Anæsthetics do stimulate the sexual functions; the ano-genital region being the last to give up its sensitiveness. Charges made by females under the influence of an anæsthetic should be received as the testimony of an insane person is. It cannot be rejected, but the *corpus delicti aliunde* rule should be insisted on. Dentists or surgeons who do not protect themselves by having a third person present, do not merit much sympathy.

Deaths from administration of chloroform after a felonious assault, unless the wounding were an unmistakably fatal one, reduces the crime of the prisoner from murder to a felonious assault.

The surgeon has no right to use chloroform to detect crime, against the will of the prisoner.

But the army surgeon has the right to use chloroform to detect malingerers.

The medical expert, notwithstanding he is sent by order of court, has no right to administer an anæsthetic against the wish of the plaintiff in a personal damage suit, to detect fraud.

Gross violations of the well-known rules of administering anæsthetics, life being lost thereby, will subject the violator to a trial on the charge of manslaughter.

A surgeon allowing an untrained medical student to administer anæsthetics, life being thereby lost, will subject the surgeon himself to a suit for damages. What he does through his agent he does himself.

The physician who administers an anæsthetic should attend to that part of the business and nothing else. He should have examined the heart and lungs beforehand. He should have the patient in the reclining position, with his clothes loose, so as not to interfere with respiration; should have his rat-tooth forceps, nitrite of amyl and ammonia, and know their uses, and when to use them and how to perform artificial respiration.

In operations on the ano-genital region and the evulsion of the toe-nail, complete loss of sensation in these parts should never be allowed, and no operation on these parts at all should be had under an anæsthetic, unless by the approval of a full consultation who have a knowledge of the dangers.

Chloroform cannot be administered by a person who is not an expert, to a person who is asleep without awaking him. Experts themselves, with the utmost care, fail more often than they succeed in chloroforming adults in their sleep.—*Annals of Anatomy, and Surgery*, December, 1881.

Statistics in Thirty two Consecutive Ovariotomies.—During the year 1881, Dr. John Homans, of Boston, has undertaken to operate upon ovarian tumors on thirty-five different occasions. In three of them exploratory incisions were made, and further operative procedures abandoned. These patients all subsequently recovered. Of the thirty-two cases, twenty-nine recovered. The tumors varied in weight from five to forty-two and one-half pounds. In twelve, adhesions existed. Among the successful operations was one upon a lady seventy-three years of age.—*Boston Medical and Surgical Journal*, January 26, 1882.

Brown-Séquard on Genefal or Local Contractures after Death.—The following conclusions are advanced in the above subject: A genuine contracture can ensue after, as well as before death, and this condition may last a long while, passing to the state of cadaveric rigidity; or it may disappear completely and subsequently give rise to continued muscular irritability. Of all portions of the encephalic mass, the cerebellum is most potent in producing contractures after death. The maintenance of a peculiar attitude, as is sometimes seen after death in soldiers that have died on the field of battle, does not depend on the sudden intervention of cadaveric rigidity, but on the occurrence of a genuine contracture.—*La France Médicale*, January 5, 1882.

The Medical Record:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, March 4, 1882.

THE EVIDENCE THAT VACCINATION PROTECTS.

The continued prevalence of small-pox naturally keeps the subject of vaccination before the public mind. But it has been made additionally prominent by the noise of a few anti-vaccinators. These latter gentlemen talk bravely, and there is so wide an ignorance of the actual truths regarding vaccination, that they secure a much larger audience than they deserve.

The practitioner is not unfrequently called upon to tell why he believes in vaccination; and possibly at times some puzzling statements are made to him, furnished the laity by a demagogical philanthropy.

The opponents of vaccination, aside from the falsehoods which they tell, get the basis for their arguments in the following facts:

One vaccination, contrary to the hopes of Jenner, does not in all cases protect for a life-time. Many neglect re-vaccination, consequently there is a very large number of vaccinated adults who are still susceptible to small-pox.

Vaccination is too often poorly performed, or else the virus is not good.

Statistics can be easily manipulated, and it is in the ingenious twisting of these, in suppressing and perverting facts, or in drawing unfair inferences, that the greatest talent has been shown by anti-vaccinators.

The parading of individual and exceptional cases, the statistics of special epidemics, broad assertions regarding subjects of which we have no complete statistics, such as the old-time prevalence of small-pox—all these go to swell the indictment.

We present now some of the statistics regarding the efficacy of vaccination, for the most part not given in a previous editorial upon this subject.

And first, as regards the reduction of mortality without reference to the frequency of the disease. There are no absolutely accurate figures showing the general prevalence of small-pox in Europe previous to Jenner's time. The mortality rates of the great city of London, however, are known. In the years 1629-35, in that city, the deaths from small-pox were about 16,000 per million inhabitants annually. In 1728-57, and 1771-80, the rate was about 18,000 per million. On the other hand, during the forty-two years from 1837 to 1879 this rate was only 410 deaths per million inhabitants, a decrease to one-fortieth.

Other facts show this not to be simply a coincidence or a decrease in the malignancy of the disease. In England and Wales, in the years 1838 to 1853 (except 1843-46), prior to compulsory vaccination, the deaths from small-pox were 420 per million inhabitants. From 1854 to 1879, after compulsory vaccination had been introduced, the rate fell to 208.5 per million, or less than one-half.

To show still further the influence of vaccination on mortality, we may cite the facts regarding the mortality among children. Between 1848 and 1852 about 69 per cent. of the deaths from small-pox in England were among children under five years of age. In the years 1873-77, after compulsory vaccination (which was applied chiefly to children), the mortality among this class fell to 13 per cent. of the total.

As regards, now, the actual prevention of the disease, as well as its diminished virulence, there are the following facts:

Among 15,171 cases of small-pox seen in the London hospitals between 1876 and 1879, about three-fourths were among the vaccinated and one-fourth among the unvaccinated. But 96 per cent. of the English population are vaccinated; hence, if these latter took the disease with equal readiness, there should have been twenty-four times as many cases among them, instead of only three times. But further, the term vaccinated includes all who have a mark on the arm, no matter how old or how poor it is. It is stated that among the above post-vaccinal cases there was no instance in which the marks were of the best character, showing efficient vaccination. And finally, despite the poor vaccination, the mortality among the vaccinated cases was only 8.8 per cent., while among the remainder it was 44.4 per cent.

According to the familiar figures of Mr. Morson, among 13,765 cases of post-vaccinal small-pox there were only 1,505 who had efficient marks, and of these only 13 died.

In the Stockwell and Homerton Hospitals, in 2,382 cases the mortality among those with good marks was less than four per cent., and this seems to be the rate usually found.

The figures given regarding small-pox in the English army and navy show conclusively that by vac-

cination and revaccination the disease has simply been stamped out. It is well known that in the last century small-pox used at times completely to cripple the navy. In 1878, among 46,400 seamen who were not rarely exposed, there were only nine cases, and these were mild. In the army, since 1865, there has been an average of one case per year among 80,000, excepting the years 1871–72, when small-pox was severely epidemic in England.

The facts showing the protective power and necessity of *revaccination* are very important. It is since the introduction of revaccination in the army and navy that small-pox has practically ceased to exist there. In small-pox hospitals it is always the rule to revaccinate the nurses and attendants. The result is that among the revaccinated attendants of over 40,000 cases of small-pox, covering a period of many years, there is no instance in which the disease was taken.

It will be seen from the foregoing that all statistics, candidly studied, show that vaccination protects. They also show that thorough vaccination and revaccination are necessary. It is the opinion of Mr. Ernest Hart, who has most ably summed up the evidence for vaccination in a report on the subject, that one revaccination at about the time of puberty is sufficient to protect for the remainder of one's life-time.

The statistics we have given relate to the use of humanized lymph. The efficacy of bovine lymph was originally tested and demonstrated by Jenner. There are not as yet many facts collected regarding the bovine lymph, now so extensively employed in this country. All the evidence, however, so far obtained, goes to show that it is efficient. Dr. Janes, of the New York City Health Board, has recently stated that, of 166 cases of small-pox admitted to the hospital in this city, 51.2 per cent. were among vaccinated and 47 per cent. among unvaccinated persons. Forty-eight deaths occurred among the latter, and only one among the former.

It is very plain that what the profession and the people should seek is to secure efficient vaccinations and revaccinations. The time spent in demonstrating the protective power of cow-pox would be wasted, were it not for the obstinacy, stupidity, and we fear often the dishonesty of the pretentious opponents of vaccination.

NERVE-STRETCHING.

The rapid spread among neurologists and surgeons of the operation of nerve-stretching illustrates alike the barrenness of our therapeutics and the zeal of the profession. It is thirteen years since Billroth, unexpectedly to himself, cured a case of reflex epilepsy by stretching the sciatic nerve. Three years later, in 1872, Nussbaum reported a case in which he had cured a spastic paralysis of the arm by stretching the lower cervical nerves. Nevertheless, as late as 1877, when Vogt first published his monograph upon nerve-stretching, he could collect only ten reported cases. In these cases nerve-stretching had been done chiefly for painful or spasmodic troubles.

The popularity of the operation became first established in 1879, when Langenbeck published his case of nerve-stretching for locomotor ataxia. In so hopeless and painful a disease as this almost any remedial measure which offered any promise would be eagerly adopted. Langenbeck found many imitators, and the operation soon became widely known.

Dr. Carl Gussenbauer, reviewing its history in the *Prager Medicinische Wochenschrift*, states that already about two hundred cases of nerve-stretching for various diseases have been reported.

The application of nerve-stretching has now been widely extended in its application to disease. Neuralgias of the fifth cranial nerve, intercostal neuralgia, sciatica, and traumatic neuralgias of the arm have been treated by this method; also epilepsies and paralysis agitans, spasms, contractures, and anæsthesias, whether of central or peripheral origin. Central diseases, such as myelo-meningitis, transverse myelitis, lateral sclerosis, multiple sclerosis, progressive muscular atrophy, athetosis, etc., are reported as having been more or less benefited by nerve-stretching. Langenbeck, who has operated in about thirty cases, reports rapid and complete cure of a case of chronic pemphigus, and also of senile pruritus, by this new procedure. De Wecker, of Paris, has even devised an operation for stretching the optic nerve, and it seems as though the surgeon would soon have his hands on every nerve in the body.

Of the absolute therapeutical value of the procedure it is impossible to speak positively as yet, except that in ataxia the results are discouraging. Gussenbauer, however, furnishes some facts regarding what results have so far been accomplished. In nerve-stretching for neuralgia—trigeminal, intercostal, sciatic, etc.—in 65 cases there were 38 cures and 14 improvements.

In reflex epilepsy, clonic spasms, and painless contractures, among 23 cases there were 12 cures and 9 improvements reported.

In trismus and tetanus, among 28 cases, only 8 were relieved; the remainder died, 8 with some previous evidences of improvement.

Many cases of anæsthesia have been improved. Lawrie, of Calcutta, reports 30 cases in which nerve-stretching had been done to relieve the anæsthesia of leprosy. The results were more or less favorable.

The reasonableness of nerve-stretching as a therapeutical measure can be better understood when we remember that it is simply a mechanical procedure, allied in kind to nerve-pounding, massage, powerful electrical currents, etc.

The nerve is a ribbon of slight elasticity, but quite extensile. The sciatic nerve can be stretched 10 ctm. with a weight of sixty pounds (Vogt). The ulnar nerve can be stretched one-twenty-fifth of its length, and it will then resume its original length if the stretching is not prolonged. The extension of the nerve affects various parts differently. It slides in its sheath, and Vogt, without good grounds, considers this to be the chief thing that happens in nerve-stretching. If stretching is slight, and does not go beyond the limits of the normal elasticity of the nerve-structures, this sliding may be all that happens. But if nerve-stretching is violent or prolonged, not only the relations of the sheath and the elasticity of the tissue, but the cohesion of the nerve-tissue itself is affected. Microscopical examinations of stretched nerves show that there may be a more rapid coagulability of the medullary sheath (Schleith), a separation of this sheath from the neurolemma (Valentin), or a solution in the continuity of the axis-cylinder and medulla, as a result of the violence done.

The question whether by stretching the nerves the cord can be appreciably moved, is not settled. There is about an equal number of experimenters upholding each view. Some of the evidence, *pro* and *con*, was given at the last meeting of the Neurological Society, reported in this issue. It is quite certain, at any rate, that the stretching affects the cord in some way, in a minority of cases.

What the results of nerve-stretching upon the function or nutrition of the cord may be is also doubtful. So far it seems, as a rule, to have been very slight. Its effect upon the nerve-trunks, however, is a direct and appreciable one. Many experimenters have confirmed the fact that stretching a nerve impairs or destroys temporarily its irritability, and this independent of the circulation. We know, also, that it can break up the inflammatory adhesions of a perineuritis, and can alter the relations of the nerve with its blood-supply.

It is evident, on the whole, that we have in nerve-stretching an addition of some value to mechanical therapeutics.

Furthermore, it seems probable that the so-called subcutaneous nerve-stretching may, in many cases, take the place of the cutting operation. This will make the procedure a very simple one.

It should be added that American neurologists and surgeons have added not a little to our knowledge of the value of this operation, as may be seen by the recent paper read at the Neurological Society by Dr. Morton, and by a recent article of Dr. Ashhurst's in the Philadelphia *Medical Times*.

PEDESTRIANISM AND THE PHYSIOLOGY OF WALKING.

The pedestrian exhibition which has been going on in this city during the past week has provoked unusual interest. It has been claimed that this is justified in part by the scientific facts which such displays of physical endurance bring out. We do not hesitate to say that such claims are mere humbug. It is already known what the human system can endure, and whatever facts might result from a study of the physiological monstrosities now displaying themselves could be more easily obtained without the painful and demoralizing spectacles proffered in the name of sport and science. Nevertheless, the present interest in pedestrianism will justify some brief discussion of certain physiological points connected with the physiology of walking, and of the muscular exercise.

The erect position of the biped man is favorable to progression. No four-footed animal of equal weight can hold out so long. Man is almost perfectly poised upon his feet. The line of gravity for the head and trunk falls a little behind the centre of a horizontal line joining the hip articulations, so that there is naturally a slight tendency for this part to topple backward. But this line of gravity for the whole body strikes the ground a little in front of the ankle-joints, consequently the muscles of the calves and of the back of the thighs have to be brought slightly into play in order to preserve the equilibrium. On the whole, therefore, the body is quite well balanced. There is slight tendency for it to fall forward, but this, although it calls for some muscular action, helps locomotion. In quadrupeds the weight of the trunk falls obliquely on the legs, tending to double them up. To prevent this the muscles, fasciæ, and ligaments which keep this extension rigid must play a larger part than in man.

In walking, the body goes through a double series of undulations, which form curves somewhat analogous to those in the flight of a bird. There is a vertical or up and down movement, the highest point being reached when the body is vertically over the supporting or active leg. The other movement is a lateral one, resulting from the necessity of keeping the centre of gravity (which is just in front of the sacral promontory) over the supporting leg. The hips being comparatively wider in women, this lateral movement must be greater. It amounts sometimes to a waddling gait. The natural movement of the arms assists this change of the centre of gravity from side to side.

In a "step" one leg gives the body a slight propulsion; it then swings forward like a pendulum, very little muscular effort being required. In the model "O'Leary style" of walking, the swinging is done by the trunk muscles, which are made to move the whole pelvis; thus the leg- and thigh-muscles are saved. It is called walking with the hips. The foot is also carried nearly parallel to the ground, and is not brought down sharply on the heel, a practice which indicates the non-expert. This swinging leg is called the "passive leg." The other, or "active leg," at this time supports the whole

weight of the body, which meanwhile is carried forward, until the centre of gravity is nearly over the spot to which the passive leg has been brought. Another propulsion is now given by the "active" leg, which then becomes "passive," and so the motions continue. The muscular mechanism by which the propulsive movements are given forms a lever of the second class, the weight being between the fulcrum (heads of metatarsals) and the power (extensors of foot). It is one of the few instances of this kind of lever in the body. Most muscular mechanisms form levers of the third and weaker class.

In a slow walk there is always one period when two feet are on the ground, and another when only one foot supports the body. The more rapid the walk, the shorter the time in which both feet are down together, until in very rapid walking this interval practically disappears, and the body is all the time supported by one or the other foot alone. In very rapid walking, also, there is not only propulsion by the hind-foot, but a kind of traction or pulling forward by the fore-foot as it is put down. This brings into play the flexors of the foot and causes the pain often felt in the front of the leg after rapid walking.

In running there is always a time in each step when neither foot touches the ground. This is brought about by a spring of the hind-foot, which raises the body from the ground. In this spring, however, the body is thrown forward much more than it is elevated. Consequently there is a great gain in speed. Professional runners cultivate a gait in which there is the least possible elevation of the body and the greatest possible propulsion, the time when the body is clear of the ground being reduced to a minimum. By such a gait the greatest feats in pedestrianism have been accomplished.

The amount of work (physiologically speaking) done by pedestrians in these six-day contests is enormous. An ordinary man without special practice can rarely walk more than twenty miles a day without the greatest fatigue. In doing this he develops an amount of work represented by about seven hundred calories or heat-units, making for the total day's work of the body about thirty-five hundred heat-units. A pedestrian who walks one hundred miles a day will produce, approximately, sixty-five hundred calories, or, in other words, the equivalent of enough heat to boil one hundred and twenty pounds of ice-cold water.

In such work as this the tissue-changes are, of course, extremely active. This change is mostly shown in the increase of the carbonic acid thrown off by the lungs. According to the views of the present day, this gas measures quite closely the muscular work. The daily amount excreted can be increased so that, instead of the normal eight hundred or nine hundred grammes, it becomes twice or even four times that sum. This carbonic acid represents, of course, the oxidation of carbon in the tissues and fluids of the body. Muscular contraction is a kind of explosion of the muscle-elements. It is attended with the evolution of heat and motion; to which are correlated a splitting up of the myosin-factors and an oxidation of the carbohydrates into carbonic and sarcolactic acid. These latter are swept away by the blood. But the products of the proteid changes are thought to be built up into muscle-tissue again, in large part. So that muscular action does not waste muscle unless it be excessive, when it is worn away just like the iron parts of the steam-engine. This view is supported by the fact that, in muscular exercise, the excretion of urea is only slightly increased. As urea is a measure of proteid decomposition, it is inferred that there can be very little destruction of muscle-tissue.

This explanation, however, has been somewhat contradicted by the experiments of Flint, and lately by those of Wolf and Kellner. Nor does it explain satisfactorily the fact that, in hard work and in training, a very nitrogenous diet is necessary. It is here that experiments, carefully conducted in connection with walking matches, might be of value to physiology. But, since Flint, no one seems inclined to undertake them.

Reviews and Notices of Books.

A Treatise on Human Physiology. Designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M.D. Seventh edition. With two hundred and fifty-two illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882.

Professor Dalton has, in the present edition, improved his book more than ever before. It now has claims, in many respects, to be considered a scientific treatise, as well as "a text-book for students," by which term it has been previously best characterized.

The author has added considerable, but has judiciously taken away more, so that the book is shorter. The new parts consist of slight modifications in various chapters, and some important additions to the physiology of the nervous system and to embryology. The minute anatomy of the brain and cord, and especially their connection with each other, are given in some detail. The phenomena of nervous degeneration are rather too conspicuously put forward. In embryology, a number of new cuts and considerable new matter, taken chiefly from Kölliker, are given.

The abandonment of the term "proximate principle," and of the cumbersome classification of these, is an especial good feature of the present edition. This part of the book is now properly designated as "physiological chemistry." As such, it forms an interesting and readable treatise on that subject, though it is very far from being scientifically accurate.

The merits of Prof. Dalton's text-book, his smooth and pleasing style, the remarkable clearness of his

descriptions, which leave not a chapter obscure, his cautious judgment and the general correctness of his facts, are perfectly known. They have made his text-book the one most familiar perhaps to American students.

The successive editions of this physiology have shown, previous to this one at least, some laggardness in appropriating the last results of scientific work. Even now it is not above criticism. The chapter upon general nerve physiology is crude and imperfect. The relations of the nervous system to the different organs of the body are also but briefly discussed. The nervous mechanisms of secretion, circulation, respiration, the mechanics of digestion, of the secretion of urine, as well as muscle-physics, receive less attention than they really merit.

Medical Communications of the Massachusetts Medical Society, Vol. XII., No. VII. 1881.

This volume contains the addresses delivered at the centennial meeting of the Massachusetts Medical Society last summer, with an account of the proceedings of the society at that time; a list of the members, officers, etc., is also given. The addresses by Drs. Green and Warren form the substance of the volume. These have, however, been fully reported and criticised in the Record.

Reports of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, February 2, 1882.

Dr. Landon Carter Gray, President *pro tem.*, in the Chair.

The paper of the evening was read by Dr. Wm. J. Morton, and was entitled,

A CONTRIBUTION TO NERVE-STRETCHING IN LATERAL SCLEROSIS, PARALYSIS AGITANS, ATHETOSIS, CHRONIC TRANSVERSE MYELITIS, SCIATICA, REFLEX EPILEPSY.

The speaker said that the operation of nerve-stretching had not yet attained a fixed position in medicine. Our knowledge of it was chiefly clinical.

Prompted by the success of the operation in locomotor ataxia, the writer made a trial of it in the analogous disease, lateral sclerosis or spastic spinal paralysis.

The following is the history of the case:

Case I.—*Spastic spinal paralysis.*—Synopsis of history: Paresis; spastic gait; muscular tension; exaggerated reflexes; absence of marked sensitive irritations; stretching, at different times, of both sciatic nerves, with remarkable relief of all the symptoms.

Patient was a man, aged fifty, and gave the following history: Present trouble began ten months ago, after exposure. While heated from excessive labor and the weather, he went to sleep in a cold cellar. At first he seems to have had pain which he thought was rheumatism. The joints, however, were not red, swollen, or hot. "All the bones in his body ached," "his tongue was thick," the extremities cold; had also "tremendous stinging" and shooting pains along the track of the sciatic nerves. At the same time he had, as now, twitching and cramps in his legs and arms, and an interlocking of the heels in walking; his legs "were like stakes." There soon supervened a feeling of numbness and tingling in the hands and feet, together with much loss of power. During the last four months the general numbness and tingling had ceased, but the loss of power had decidedly increased and settled almost entirely in the legs; they were heavy, stiff and unmanageable.

His gait was slow and shambling, and he had to use a cane.

When examined, April, 1881, all the leg muscles were in a spastic condition and the tendinous reflexes exaggerated. Any attempt at passive motion was met by involuntary muscular resistance which had to be slowly overcome, and such an attempt provoked at the same time violent shaking of the member. If, in the sitting posture, the leg was caused to rest upon the toes, violent trembling ensued. No disturbances of sensibility.

Operation was performed June 16, 1881. The patient was etherized, an incision made through the gluteus maximus, and the sciatic nerve of the *right* side lifted out of the sciatic notch on the forefinger, and vigorously stretched.

It required a very profound anæsthesia to overcome the involuntary shaking of the legs. The gluteus maximus was excessively thick, and apparently normally hypertrophied by constant spasmodic action. The nerve presented nothing abnormal in its appearance. The finger was intentionally used to stretch with, in order to avoid local laceration of nerve-tissue. As far as can be judged by pulling on a spring balance for comparative measurement, a force of about forty pounds was exerted in pulling on the nerve. This was continued about five minutes, until a sense of something "giving" was experienced.

The wound was closed by wire sutures, dressed with carbolic oil, and the patient walked a number of blocks on his way home. No immediate effect in his walking could be observed. There was no numbness, and the patellar reflex was still as exaggerated as before.

The wound healed by first intention.

The patient's symptoms were almost immediately relieved. On the sixth day he walked over a mile. The patient steadily improved until about August, when his left leg began to get bad again. October 11, 1881, the left sciatic was stretched. He steadily improved, and on January 23, 1882, had only a slight weakness in the left knee and ankle, with slight exaggeration of the tendon reflexes.

Case II.—*Paralysis agitans.*—Patient, a planter, aged forty-three; family and personal history good. Present trouble began in 1875, with "drawing" sensations in left shoulder and dragging of left leg. Soon left leg and then arm began to shake.

In 1877, about the same symptoms appeared in the right side. About 1879 the whole body, except the head, began to be comparatively rigid, and the difficulty in walking increased. In the spring of 1881 all his symptoms had become more pronounced, and he could not dress himself, cut his meat, feed himself, etc. The head had become fixed and bent forward, and the trembling more severe and general. Walking was difficult and clumsy. He could assign no cause for his trouble. Had had no fright or other emotional trouble.

When seen by the speaker, his condition was as follows: Rhythmical, continuous trembling of both arms, severest in hands. Brief intermissions occur while lying down; the slightest attempt at purposed movements excites a violent shaking of the arms, which increases up to a maximum. Emo-

tional disturbances have the same effect. The head never trembles. Trembling ceases during sleep. Propulsion and retropulsion marked, especially when tired. Gets greatly fatigued. Walks but little, and that with assistance. The rigid and "soldered together" look of the patient's body, as described by Charcot, exists to a marked degree.

Patient's hands are the characteristic "writing hands" of Charcot. Muscular power well retained, but slowly brought into action. Speech slow and not understood, except by those familiar with it. Tendon reflex normal, but response slow. No alterations in general sensibility. Electro-muscular contractility normal.

Patient had already experienced every treatment familiar to the speaker in medicine: nitrate of silver, chloride of gold, hyoscyamia, various bromides, zinc, strychnia, phosphorus, etc., and he had tried galvanism, but continued to grow steadily worse. Dr. Morton first treated him with static electricity. For about a month this produced considerable relief, far more than by any other treatment. The patient then relapsed.

It was therefore determined to try nerve-stretching. This was done October 18, 1881. The incision was made at the junction of the lower and middle third of thigh, where it is much easier to reach the nerve, and the operation is a simple one.

There was a very

PECULIAR APPEARANCE TO THE EXPOSED NERVE.

It was large, round, and of a dirty yellowish brown color. To the touch the nerve was hard, firm, stiff, and unyielding, and gave, when stretched, a creaking or gritty sensation. The speaker thought it was in a condition of sclerosis. The nerve was stretched to a weight of about forty pounds, and pulled from centre to periphery and *vice versa*. Tremor ceased during etherization. Ether was borne remarkably well. The nerve, now serpentine, was laid back in its bed and four silver-wire sutures and carbolic-oil dressing applied. On recovering from the effects of the ether patient had very imperfect use of his leg. The toes drooped, the foot swung inward, and he could not advance or draw back the leg; sensation was nearly abolished. The wound suppurated for several days—the patient was worse. Then the paralysis began to mend.

November 20th.—Walking had greatly improved, the general rigidity was nearly gone. Tremor less severe, with longer periods of rest; mental irritability less. On February 1st, three and one-half months after the operation, he was reported "a good deal better than before the operation." Dr. Morton, in commenting on the case, said that he did not report the case with any recommendation as to a further adoption of such a plan of treatment. He would wish each one to decide as to its value upon the facts presented.

CASE III.—*Athetosis, right side.*—The patient was a historic one, being the first case of athetosis observed after Dr. Hammond's description of the disease. Dr. W. T. Gairdner, of Glasgow, reported it in the *Journal of Mental Science*, July, 1873:

"At the age of three it was noticed that the right leg gave way, causing him to fall. He had no convulsions or loss of consciousness. Until eleven years of age was very lame, then walked better. Three months after the right leg was first affected the right hand began to show peculiar movements. It would unintentionally close on objects and hold them fast. Then the hand and fingers began "to twist and work," particularly when he attempted purposed movements. This hand, as far as he recollects, has never been better nor worse up to this day."

When seen by the speaker the most obvious feature was the movements characteristic of athetosis. Dr. Morton called attention to the

COMPOUND CHARACTER

of these movements, *i.e.*, a flexion of one part of the hand with extension of another. In this respect there was a marked difference from the single movements of chorea. Static electricity caused only temporary improvement. It was resolved to stretch the ulnar and median nerves. This was done November 16, 1881, the nerves being vigorously pulled.

November 25th.—Hand quiet for the first time in the patient's memory.

January 25, 1882.—The continuous and compound movements are now totally abolished; but there is at times still a very slight twitch of the thumb. The position of the fingers is in an easy and natural flexion. Some numbness of the hand persists. Patient says that it is a great deal less trouble to him than formerly, and that he prefers it a thousand times in its present condition.

CASE IV.—*Chronic transverse myelitis.*—Reported from Dr. Hammond's clinic. The patient a man, aged sixty-four. In 1864 first noticed a tingling sensation in his two feet; this gradually extended up the legs. During the last two years has had twitching in the legs, great loss of sensation, sense of constriction around the waist, much wasting of the muscles, trouble in retaining his urine, constipation, and great difficulty of locomotion. Condition, when first seen, was as above, with exaggerated reflexes, especially patellar tendon reflex, a sensation of walking on soft ground, ataxic gait, coldness and bluish red color of the legs, and atrophy of the muscles. Never had pain in his legs. Electric irritability of nerve and muscles neither quantitatively nor qualitatively altered. On August 4, 1881, the right sciatic nerve had been stretched by Dr. Osborn with excellent results. On September 18, 1881, Dr. Morton stretched the left sciatic nerve. The operation was performed without an anæsthetic. The following very curious and favorable results followed the two operations: Cutaneous sensation returned immediately upon the stretching. The legs, five minutes previously insensible to the cut of a knife, were now sensitive to the slightest prick of a pin. During the operation the patient located the pain of the incision and handling of the nerve to the region of the anus. After stretching he located painful sensations correctly.

An immediate sequence of the return of sensation was the return of the knowledge of the relation of the soles of his feet to the ground, hence the power of locomotion seemed, as it were, miraculously restored to him.

One month later patient was still much improved.

January 27, 1882.—Very little benefit remains from the operation. The anæsthesia is not as complete as before, but the other symptoms are nearly as prominent as previously.

The case suggested two reflections. In the first place, the operation did no harm, and temporary benefit was derived.

In the second place, it is not unlikely that a portion of the benefit indubitably derived in locomotor ataxy above and beyond the relief of the fulgurating pains is due to a return of cutaneous sensation, per-

haps also muscular sense, and hence, consequently, increased power of locomotion.

Case V.—*Idiopathic sciatica.*—The patient, a man aged thirty-three, was attacked with sciatica on the left side, eight months before applying to Dr. Morton for relief. The case was severe and obstinate. The pains lasted for three months, then left him for about two months, then returned again. He was treated for a while at Roosevelt Hospital, and got some relief, but finally left that institution. Dr. Morton first treated him with static electricity, which absolutely relieved pain for a day, but it then returned. After two weeks' treatment, though somewhat improved, nerve-stretching was decided upon, and performed October 22, 1881. The nerve, when laid bare, was found to be red and vascular. It was stretched for five minutes with force sufficient to raise the leg from the table. No signs of tortuous veins remained after stretching. Pain at once disappeared. Three months after operation the patient remained free from pain and cured.

Case VI.—*Reflex epilepsy.*—Stretching of brachial plexus. Patient, a man aged forty, came to Dr. Hammond's clinic February 5, 1880. For ten years he had been subject to numerous daily attacks of spasms. Occurred mostly in bed between 3 and 6 A.M. There was no loss of consciousness. An aura always existed. The main peculiarity of the attack was that it could be induced usually at will by patient or physician, or accidentally by a bystander, by touching various points of what appears to be a true epileptic zone of Brown-Séquard. The touch of the barber to the right side of the neck, or of one of his children on his shoulder, often brought on an attack. Urination sometimes brought on an attack (irritation of neck of bladder?).

No neuropathic history; no knowledge of injury to any part of the body; used to drink to excess, and thinks this caused his disease; has no specific history; children healthy; never falls. loses his senses, or bites his tongue. Irregular eating and drinking increase number of attacks. Mind good, though thinks his memory is slightly impaired; no headaches and no vertigo.

He was treated with bromides, glonoin, static electricity, etc., with temporary good results. But he finally began to get worse, and, as a last resort,

STRETCHING OF THE BRACHIAL PLEXUS

was attempted. The operation was performed as follows:

After dividing the skin and subcutaneous cellular tissue, the aponeurosis was divided on a director, and the axillary vein and artery exposed. The median, ulnar, and internal cutaneous nerves were separately extracted and hooked over the end of a silver catheter; then the finger was passed beneath them and they were vigorously stretched and pulled from the centre, with a view of stretching the entire brachial plexus and cervical cord. The wound was then closed with wire sutures and dressed with carbolic oil.

The time since operation was too short to draw any conclusions as to its effect. The attacks had been much fewer in number, though occurring daily.

The speaker then discussed some of the surgical aspects of the question. It is necessary to stretch for some time, three to five minutes, and to use considerable force. The finger is the best instrument for the purpose. The brachial plexus of the cadaver, according to Trombetta, will stand a strain of 48 to 81 pounds; the crural, 83 pounds; the sciatic, 184 pounds. The main strain, after resistance to the natural adhesions is overcome, is upon the posterior roots.

IS THE SPINAL CORD STRETCHED?

Harless and Huber, Valentin and Conrad are cited by Chauvel as saying it is not. But functional disturbances created on the other side of the body in certain reported experiments would seem to indicate that the spinal cord is in reality pulled downward. According to Gillette, the medulla oblongata in a cadaver was felt to move when the sciatic was pulled upon.

Regarding the effects of stretching, the speaker drew the following conclusions from his own experience:

First.—That moderate stretching of the nerve produces merely a temporary motor paralysis, easily recovered from, and a very considerable paralysis of sensation, likewise easily recovered from.

Second.—That severe stretching produces a marked motor paralysis of long continuance (months), and a tolerably complete paralysis of sensation, much more quickly recovered from than is the motor paralysis. Cases of spasm should therefore be stretched vigorously.

Third.—In Dr. Morton's cases motor paralysis had been more persistent than the sensory.

Fourth.—That profound cutaneous anæsthesia may be removed for months, perhaps permanently.

The speaker, in conclusion, referred to some of the unfavorable reports regarding the operation from Germany; also to the so-called subcutaneous method of stretching. He considered nerve-stretching to be one of the mechanical forms of treatment allied to pounding, kneading, electricity, etc.

The discussion, by request, was opened by Dr. John A. Wyeth, who said that he had stretched the sciatic nerve in a

CASE OF LOCOMOTOR ATAXIA

in the month of September last. It was a case of six or seven years' standing, accompanied by intense pains in both lower limbs. The operation was done as had been described by Dr. Morton, and both nerves were stretched. In the left leg the nerve was stretched and pulled much more severely than in the right. The result was that in the left limb the pains ceased entirely, and did not return for three months when they were much lighter, while in the right they recurred. There was no improvement in the gait or in co-ordination. The patient was in bed for ten days after the operation.

Dr. A. P. Gerster reported a case of nerve-stretching in locomotor ataxia. The patient was a German, aged forty-five, a carpenter, who came to the German Hospital, September 19, 1881. The characteristic symptoms of the disease were present: absence of tendon reflex, ataxic gait, anæsthesia of feet and legs, fulgurating pains which caused great distress. Rectal and vesical action normal. Both sciatic nerves were stretched vigorously, the leg being lifted up by the nerve. The wound healed very sluggishly, as though there was some trophic disturbance. The sutures came away, the edges not uniting, yet there was no good suppuration, but only a kind of serous discharge.

The result of the operation was: no improvement (or increase) in ataxic gait or anæsthesia, but considerable relief from the pains, up to four months after the operation.

Dr. G. M. Beard asked if nerve-stretching had been used in the

TREATMENT OF WRITER'S CRAMP.

He thought that it might prove useful in that disease, and would not hesitate to try it. He considered nerve-stretching to be a form of mechanical treatment which did not differ in kind from those formerly used, such as acupuncture, electro-puncture, electricity, massage, etc. The speaker believed that nerve-stretching would take its place permanently in the therapeutics of nervous diseases.

Dr. Wm. A. Hammond said that he had stretched two sciatic nerves in the same person for locomotor ataxia. The patient, a lady, was unable to walk, and the pains were simply atrocious. The symptoms were confined to the lower extremities. At times there was both rectal and vesical sphincter paralysis. He stretched both sciatic nerves vigorously. As in all his other cases (now seven or eight), the wound healed by first intention, though he had not used any antiseptic treatment. There was no improvement, either in locomotion or in the pains.

IN SCIATICA

the speaker had stretched the nerve in a patient with immediate favorable result. The case was a very bad one. He had repeatedly stretched the nerve by flexing the thigh upon the pelvis, keeping the leg perfectly straight. He found it necessary however, to give ether, for the operation was a painful one, and besides, there was antagonistic effort on the part of the patient. By this method the speaker thought that the sciatic could be stretched as well as by cutting down upon it, and, in his opinion, the former method would supplant the latter in most cases. In large and fat men the cutting operation, however, would probably still have to be performed.

The speaker referred to Dr. Morton's reported case of lateral sclerosis, which he had seen, and thought the result a remarkable one. [The patient was exhibited to the Society.]

Dr. C. L. Dana related an experiment performed by him to test the question whether

STRETCHING THE SCIATIC MOVES THE CORD

as is asserted by some. A dog weighing twelve pounds, which had been dead twenty hours, was taken, the skull-cap removed, and one sciatic nerve exposed and pulled upon strongly. There was no movement of any part of the brain. The brain was removed, and the medulla exposed, both sciatics were found and both pulled upon powerfully and simultaneously, but not the slightest movement could be obtained. The spinal cord was then exposed in the dorsal region. The most powerful traction failed to move the cord either when lying in the canal, or when raised out of it upon a knife-handle. The cord was cut in the lower dorsal region, but no movement of the lower segment could be obtained. The tissues were not softened.

The speaker said that no positive inferences could be drawn from such an experiment. Still, if powerful traction (over seventy-five pounds) upon both sciatics of a twelve-pound dog failed to move the cord appreciably, it might be inferred that ordinary nerve-stretching in human beings did not move it.

[Dr. Dana writes that a few days later a similar experiment was made, in connection with Dr. W. H. Porter, upon the human cadaver. The brain was removed and the medulla exposed. Dr. Porter drew this forward so as to put the cord slightly on the stretch. The sciatic nerve was then found and traction made upon it, but with no effect whatever upon the medulla. A broomstick was finally twisted into the nerve, and two men pulled until the nerve broke, but no motion of the medulla could be detected. The sciatic of the other leg was tried in the same way, with similar results. The subject was a large man, about fifty years of age, who died from cirrhosis of the liver.]

Dr. W. A. Hammond said that while the last speaker's observation was no doubt correct, it did not prove that some of the fibres in the cord connecting with the sciatic were not moved. The motion might be slight and unappreciable.

Dr. Wyeth asked what was the mortality rate from the operation.

Dr. W. J. Morton said that, so far, five fatal cases had been reported. Of these three were indistinctly attributable to the operation, while two were distinctly attributable to surgical procedures.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 27, 1881.

Dr. T. M. Markoe, President, in the Chair.

NASO-PHARYNGEAL POLYPUS.

Dr. George A. Peters presented the patient, who was brought before the society in March, 1881, and from whom he had removed a naso-pharyngeal polypus that occupied the fauces, posterior nares, and presented in the anterior nares. The patient first came under his observation last January, after several attempts had been made to remove the tumor, but only very small portions had been taken away. He entered St. Luke's Hospital, where Dr. Peters operated for its removal by cutting through the soft parts in the ordinary way for removing the upper jaw; that is, inserting the knife just below the inner canthus upon the left side, cutting through all the tissues to the bone on the line of junction between the cheek and nose, passing around the left ala into the opening in the nostril; thence along the junction of the skin and mucous membrane to the middle line, and along the latter to the free margin of the upper lip, which was completely divided. This flap was dissected up, the bone beneath fully exposed and removed by means of a saw and forceps. After the bone was removed it was found that the tumor was extensively attached to the basilar process of the occipital and to the sphenoid bones, and it was removed with the scissors, scrapers, and the fingers. It was very vascular, and the hemorrhage was profuse, but not a drop of blood entered the trachea or larynx, because of the precaution taken to introduce a tube into the crico-thyroid space and crowding a large piece of sponge into the posterior fauces. The disease was pronounced, after microscopic examination, to be a fibroma. The patient recovered and passed from under observation. After a time he reappeared, when Dr. Peters noticed that there was a recurrence of the disease, which went on increasing in size until early in July, when he came under Dr. McBurney's observation, and the original operation was repeated, with the exception, of course, of removing the portion of bone. The tumor at that time was rather larger than it was at the original operation. The operation which Dr. McBurney performed was also a very bloody one, but the wounds healed readily. The disease had, how-

ever, recurred, but had been destroyed by burning it down with the actual cautery, which had been applied seven or eight times at intervals of two or three weeks, and each time it seemed to recur from less space, and the prospect was that it would finally be entirely cured. The growth was still very vascular, but there was no hemorrhage attending the use of the cautery provided the cautery iron was kept at a cherry-red heat.

Dr. McBurney, in reply to a question, stated that he was not able to say positively whether the second specimen was precisely like the original tumor; but, at all events, it had exactly the same gross appearance.

TWO FRACTURES OF THE SAME PATELLA.

Dr. James L. Little presented a patient with the following history: A young man, in 1879, fell from the fourth story of a building, and, striking upon his feet, so bent his knee as to produce a transverse fracture of the patella. He entered St. Luke's Hospital where he was treated for the accident in the usual manner, and made a good recovery with ligamentous union. Nine months afterward he received a second fracture of the patella, about half an inch above the point where the original fracture occurred. It was difficult, at the time, to ascertain which was the recent and which was the old fracture, there being three movable fragments. He was treated for the second fracture and made a good recovery, and has been out of the hospital for two years. There could be distinctly felt three fragments of the patella; with two ligamentous bands, about half an inch in length, uniting the fragments. The usefulness of the limb was almost completely restored, although the patient had some difficulty in going up and down stairs.

Dr. McBurney then read a paper on

FISTULA IN THE ANTERIOR PORTION OF THE URETHRA.

It contained the histories of two cases of fistula in the floor of the urethra anterior to the scrotum.

The first case was that of G. W. C——, forty-eight years of age, who presented himself for treatment in April, 1879. A phagedenic ulcer of venereal origin, which had appeared five months previously, had healed after opening into the urethra just at the right of the frænum. The fistula remaining was surrounded by cicatricial tissue, and was large enough to admit a No. 22 French bulbous bougie. The meatus was contracted to No. 20 French, and strictures of long calibre existed at 2¼, 2½, and 3¼ inches behind the meatus. The meatus was first enlarged and the strictures divided until a No. 34 French steel sound could be easily passed into the bladder.

Three months later the fistula was closed in the following manner. The urethra was opened in the perineum to provide against the passage of urine over the seat of operation. The foreskin was then pulled tightly backward, and the surface around the fistula to the extent of about half an inch square was completely rawed. On the inner surface of the foreskin, a corresponding raw surface was made, the base of which reached the posterior edge of the fistula. The foreskin being now rolled forward, the two raw surfaces were brought in contact, the edges were stitched together and the penis enveloped in lint soaked in carbolized oil. After this the urine was carefully drawn through the perineal opening several times daily. At the end of fourteen days union was found to be complete, and thirteen days later the perineal wound had completely healed.

The second case was that of William B——, forty-seven years of age, who presented himself for treatment in November, 1875. In this case a fistula existed just anterior to the scrotum, the loss of substance in the floor of the urethra being three-fourths of an inch long, and as wide as the urethra. This had resulted from urinary infiltration, and was surrounded in every direction by dense cicatricial tissue. The fistula was finally closed by a series of operations, the first of which was designed merely to surround the fistula with healthy integument, in order that subsequent plastic operations could be performed to supply the loss of substance. This having been accomplished, a second operation was performed to construct a floor to the urethra. This was done, after the method of Szymanowski, by turning a large flap of skin so as to present integumental surface to the urethra. A small opening was still left anterior to this new floor, and another small one posterior to it. These were closed by similar operations, in closing the posterior opening a flap being taken from the scrotum. At each operation the perineum was opened to allow of the free passage of urine posterior to the fistula. The perineal wound healed in each instance with great rapidity. One year after the last operation a careful examination of the patient was made, and it was found that No. 26 French sound could be passed readily into the bladder. No twisting or bending of the penis occurred, even when erection took place.

Dr. A. C. Post referred to a case which came under his observation in the New York Hospital as long ago as when Dr. George A. Peters was house-surgeon. It was a fistula in the anterior part of the urethra, just behind the glans penis, following extensive sloughing. He succeeded in closing it, first supplying a triangular flap of integument from the scrotum, passing it forward through the seat of the fistula, and then making two semi-elliptical flaps, and drawing them together so as to form a crest, and including them between two splints of perforated sole-leather. After the splints were removed, the surfaces receded so as to leave a flat surface with a mere pin-hole opening, which continued while the patient was under his observation, but he believed that it ultimately closed, for the patient promised faithfully to return if it did not heal completely. He thought it was Diffenbach who first suggested bringing flaps together by broad surfaces instead of uniting them at their edges. Dr. Post's case was published in the *Medical Gazette* of New York, February 7, 1880, p. 85.

Dr. Weir referred to four cases of urethral fistulæ, some of which were already known to members of the society. Two of them were treated successfully by the method first practised by Szymanowski, which consists in principle of double superimposed flaps; in one of these cases there was another opening in the perineum through which urine escaped, that was subsequently cured by a slight modification of the same method, performed by Dr. Sabin. In both the cases the opening was ante-scrotal. The third case was one in which there was a small opening just at the corona glandis. In that instance he made broad surfaces, united them by means of the quill suture, as suggested by Duplay, using for the quill a piece of rubber, being very careful not to make the sutures very tight. It did very well, although there was sloughing at one point. The fourth case occurred last summer in the New York Hospital, and there was quite an extensive ante-scrotal opening. The plan of treatment by making

broad surfaces was employed, and these were held in position by metallic sutures and also by means of quill sutures, but the result was an absolute failure. His individual preference was for the superimposed flaps.

Dr. Little referred to a case which he had had under observation for the last five years. It was one of extensive perineal fistulæ, in which there were a number of sinuses running in various directions, the longest one opening near the left trochanter. There was also considerable loss of tissue in the central portion of the perineum, and also a communication between the membranous portion of the urethra and the rectum. When the patient urinated, the urine issued from six different sinuses in the perineum and its vicinity. Several operations were performed which succeeded in closing all the sinuses except the opening into the rectum and one in the perineum. Before attempting to close the perineal opening he deemed it best to close, if possible, the recto-urethral fistula. This opening was large enough to allow the passage of a No. 14 sound (English). Two operations were performed at different times by paring the edges of the opening in the rectum and closing the wound by silver sutures. Both of these operations were unsuccessful. On June 7, 1879, about eight months after the last operation, Dr. Little performed Szymanowski's operation in the rectum. This is an operation very similar to that described by Dr. McBurney. The patient was placed on his left side and the rectum kept open by a Sims' speculum. After the operation the urine was drawn off through the perineal opening. The flaps did not unite, and the patient left the hospital a month later, with the wound surrounded by healthy granulations. Six or eight months afterward he returned, and the opening had so closed that only an ordinary probe could be passed. Dr. Little then applied nitric acid several times to the edges of the small fistula remaining, and the last time he saw the patient three weeks had elapsed without any urine passing through the rectum. He expected the patient to return, when he would attempt to close the remaining fistula in the perineum according to the plan described in the paper of the evening.

Dr. H. B. Sands said that four years ago he obtained success in the treatment of a case of urethral fistula by a method not usually recommended. The patient was a young man who had had a close stricture, probably of traumatic origin, just in front of the peno-scrotal junction. For the relief of this, Dr. Sands had performed external urethrotomy, but the wound did not heal, and a fistulous opening was left which would admit of a large-sized urethral bougie. For the closure of that fistula he performed the operation known as Nélaton's, which consists in making in front of and behind the fistulous orifice a transverse incision about three-fourths of an inch in length and detaching a bridge of integument, which is slid forward and retained in position with sutures in such a manner that the orifice in the integument and the deeper orifice do not correspond. The operation failed. He then succeeded in closing the fistula by the use of the actual cautery, a large-sized bougie was inserted into the urethra, and the cautery applied quite freely to the edges of the opening, only one application was made, after which the fistula rapidly contracted, so that at the end of ten or fourteen days it was closed entirely. No contraction of the urethra followed the use of the cautery. He had seen the patient repeatedly since, and a No. 28 French sound could be easily passed into the bladder. Such an operation as this, of course, could only be expected to succeed in a case in which there was no loss of substance. He had no doubt that in cases such as were alluded to by Dr. McBurney, the operation performed by him was the most promising of good results.

TRAUMATIC STRICTURE OF THE URETHRA.

Dr. G. A. Peters referred to a case now in the New York Hospital: a boy, five or six years of age, in company with several other boys, tied a string around the penis in order to see which one could endure it the longest. The result was sloughing, and when Dr. Peters examined the penis he found a close stricture, not more than one inch behind the meatus, which would admit only the finest filiform bougie. The patient's temperature at some parts of the day was 105° F., and the urine was continually dribbling. He was anxious to relieve the patient, but how to operate was a question upon which he would like some information from the society. He thought that the operation to be performed lay between divulsion and external incision. Divulsion he looked upon with a good deal of apprehension, because he thought it would be exceedingly dangerous and somewhat difficult to perform.

Dr. E. L. Keyes suggested a linear incision behind the stricture, catheterism from that point forward, and cutting upon the blunt end of the instrument at the meatus internus, leaving the linear opening to heal of its own accord, which it probably would do without trouble.

Dr. A. C. Post thought that the external incision was the safest operation to perform.

[Dr. Peters completed the history of the case January 10, 1882. He found that he was able to slip a tunnelled sound of small size over the whalebone guide, and with a moderate amount of force to carry it beyond the obstruction. It was evident that the stricture was linear. Believing it to be better to cut than to divulse in this case, he introduced an Otis instrument to about eighteen and then drew the blade through, which enabled him to pass a No. 15 French through the stricture. A sound of that size had been introduced daily since the operation, the high temperature present before the operation had subsided, never going above 101° F., and there was no evidence of trouble of any kind. Dr. Peters thought it was the smallest urethra the cutting instrument had ever been used in, and he was surprised at the facility with which the operation could be performed.

The President remarked that he was present at the operation, and that it was an extremely satisfactory result of what promised, at the outset, to be a delicate and difficult procedure.]

REFRACTURE OF THE RADIUS.

Dr. James L. Little narrated a case as follows: A woman, thirty years of age, received a Colles' fracture, and it was treated as a sprain, resulting in great deformity. Subsequently she was examined by a physician, who told her to let it alone, and advised against a refracture because so long a time had elapsed since the receipt of the original injury. Although it had been six weeks since the original fracture occurred, Dr. Little attempted refracture, succeeded after resorting to considerable forcible manipulation, and replaced the fragments almost in their normal position. Union took place with very slight deformity, only a slight projection of the lower extremity of the ulna remaining. Previous

to this case he had always failed in attempting to refracture in deformity from Colles' fracture at a period later than three or four weeks after the original injury.

The patient suffered great pain in the wrist and hand before the operation, but this symptom was entirely relieved after the fragments were placed in their normal position.

SARCOMA OF THE FOREARM.

Dr. Erskine Mason presented a specimen with the following history: It was removed last July, from a female patient, fifty-four years of age. Her condition was one of great feebleness, being reduced by the excessive pain which the tumor had lately caused, as well as from repeated profuse hemorrhages. The growth had already been removed three times. The first operation was performed twenty-three years ago, the second twelve years ago, and the third five years ago. The growth always occurred within one inch of the seat of the original tumor. After the first operation the disease remained absent for nearly four years, after the second operation it did not occur until one year, and after the third operation it reappeared within one month, and grew very slowly until within one or two months prior to the time of removing the forearm. The specimen was examined by Dr. Delafield, who reported that the tumor was not connected with the periosteum, but was subcutaneous. It was composed of dense connective tissue, the bundles of fibres running along in different directions; along the fibres were fusiform cells and long oval nuclei in large numbers. Since the operation the patient had remained well.

STRICTURE OF THE ŒSOPHAGUS.

Dr. Weir presented a specimen embracing the trachea, œsophagus, and stomach, which showed a narrowing of the œsophagus as the result of swallowing oil of vitriol. It was removed from the body of a man aged forty years, who came into the New York Hospital in December, 1880, several months after the accident, for the relief of dysphagia. For a time he was under the charge of Dr. Sands, who was unable to definitely locate the narrowing of the œsophagus, but believed that the constriction was at its upper portion. When Dr. Weir came on service he renewed the attempts to define the size and locality of the stricture, but failed in accomplishing either. Urethral olivary bougies of different sizes were arrested just below the cricoid cartilage, but none could be made to engage in the supposed stricture. His examinations occupied several days, and after one of his attempts to introduce a bougie the patient said he could swallow very much better, and his improvement was such that he was able, within a week, to swallow milk more readily. A few days afterward he was able to swallow broad, the crust as well as the soft part. The patient continued to improve in general condition so much that the idea of an operation was entirely dismissed, and he left the hospital soon after. On last Thursday the specimen was brought to Dr. Weir by Dr. Tuttle, formerly house surgeon in the New York Hospital, and at present physician in chief at the Emigrant Hospital, who told him that three or four weeks ago this man was brought into his wards with a cough and a profuse purulent expectoration, and with considerable difficulty in swallowing. He was able to get down only one pint of milk a day. At different times, after coughing considerably, soon after swallowing milk, it was noticed that there were streaks of milk in the expectoration, and the idea suggested itself that there was a communication between the œsophagus and the air-passages. On examination, after death, it was found that the stricture began about one inch below the cricoid cartilage, and extended downward about two inches, at which point there was an opening that was said to have communicated with cavities at the apices of the lung. At the time of the autopsy, as reported by Dr. Tuttle, an instrument not larger than a lead-pencil could be introduced through the stricture. Now, after some two weeks' soaking in Wickersheimer's fluid, a No. 34 bougie *à boule* defined the stricture. There was evidence of ulceration in the œsophagus, below the stricture. The specimen was specially interesting from the fact that it belonged to a class in which, if seen when the symptoms were urgent, gastrostomy or œsophagotomy might have been successfully performed.

Dr. H. B. Sands remarked that the specimen was somewhat unsatisfactory in its present condition. The account given was that at the autopsy a close stricture was found near the cricoid cartilage; but it was difficult to see how, farther down, the œsophagus could be so much dilated in the absence of stricture below the point of ulceration. It was difficult to understand, if there was no stricture below the ulceration, why that ulceration should have existed, unless as a result of some manipulation of which there is no account in the clinical history. The impression which he received when he examined the man, now a little more than a year ago, was that the stricture was very close and high up, for he succeeded but once in passing a bougie below the point at which the stricture seemed to begin. At that time a whalebone instrument passed through the constriction, and, using this as a guide, he slipped over it two olive-shaped sounds, but was unable to pass them through the stricture. Some bleeding followed the attempt, so that he was afraid to repeat it, and the patient's condition was not urgent enough to call for any operative interference.

Dr. Sands recalled a case which showed that there were some exceptions to the rule that these strictures always go on from bad to worse. In the beginning of the year 1875, a lady consulted him concerning a stricture of the œsophagus, caused by the swallowing of an alkali. He put the patient under the influence of ether, and succeeded in passing only a small urethral bougie, about No. 6 or No. 7. The patient at that time, and subsequently, was unable to swallow anything except food in a liquid state, and subsisted upon milk, with occasionally the addition of a raw egg. She was under Dr. Sands' care between six and nine months, during which period he succeeded in dilating the stricture so that it would admit a No. 24 or No. 25 urethral bougie, but was never able to insert an œsophageal sound. The use of the instrument was always attended with discomfort, sometimes followed by an increase in the difficulty of swallowing, and he felt constantly afraid of making a false passage. The patient was told that probably the stricture would become closer, and the question of opening the stomach was presented to her. After full consideration, she decided to let the stricture take its own course, and returned home, afterward submitting to no treatment whatever. Nevertheless, she did not grow worse, but improved in health, increased in weight about twenty pounds, bore two children, and died suddenly, in June, 1880,

nearly five years after treatment had been discontinued, from embolism following pneumonia. The patient continued to swallow without increasing difficulty up to the time of her fatal illness.

Dr. Mason, with reference to the ability to swallow bread, recalled a case which he saw at the Colored Hospital some years ago. The patient had a tight stricture, through which only a small urethral bougie could be passed. It was decided to open the stomach, but the day before the operation the patient was able to swallow the soft part of several oysters readily. The day previous to that he was able to take milk only, and on the day proposed for the operation he drank milk without difficulty. From the fact that he swallowed so well, the operation was abandoned. Two or three days afterward the man was found dead in his bed. At the autopsy, epithelioma of the œsophagus was found, which had caused a tight annular stricture. How the oysters and milk were swallowed had always been a conundrum.

Dr. Post referred to the case of a child, who had stricture as the result of swallowing lye. Dilatation was practised by means of a flexible bougie, and in the course of a year there was manifest improvement, so much so that the patient was regarded as being out of danger. He also referred to a patient in whom there was a deep-seated stricture, caused by pressure from without. It was evident from the sensation that the difficulty was low down. The patient was able to swallow liquids in small quantity, but not readily. Dr. Post afterward heard of his having died as a result of the disease. But a short time before death there was rupture of an abscess into the œsophagus, from which a large quantity of matter was discharged by the mouth, and the patient after that was able to swallow with a great deal more ease than he had formerly done. The case was interesting as showing the effect produced by an exogenous stricture.

Dr. Little referred to a form of stricture which he did not fully understand. In illustration he gave the history of a case as follows: The patient, somewhat emaciated, had been unable to swallow solid food for several weeks. Liquid food would usually pass down, but sometimes it would be regurgitated. The introduction of the bougie failed to detect narrowing of the œsophagus, but a few successive introductions of the instrument relieved the patient completely, and since that time he had been able to take food without difficulty. He had seen a number of such cases in Burlington, Vt. In all of them the œsophagus seemed to hug the bougie quite snugly at the first two or three introductions. There was no evidence whatever of organic stricture, nor did it seem to him that they belong to the class ordinarily known as spasmodic strictures.

Dr. Weir and The President thought that the cases described by Dr. Little belonged to the class of spasmodic strictures.

The society then proceeded to the transaction of miscellaneous business.

Nerve Stretching in Traumatic Tetanus.—If one can judge by the reported cases, nerve-stretching is a very successful remedy in traumatic tetanus. According to Mr. Henry E. Clark, of Glasgow, this procedure has been resorted to in about twelve reported cases. In most of these the result has been a cure.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 27, 1882.

Dr. F. R. Sturgis, President, in the Chair.

The paper of the evening was read by Dr. George H. Fox, on

THE PERMANENT REMOVAL OF SUPERFLUOUS HAIR.

It will be published in full in a subsequent number of the Record.

FIRST AID TO THE INJURED.

The society, on recommendation of the Comitia Minora, approved of the plan of proposed instruction to be given by the State Charities Aid Association, with the view to giving intelligent aid to the injured before the arrival of the surgeon or physician.

THE REPORT OF THE DELEGATES TO THE MEDICAL SOCIETY OF THE STATE

was then read by Dr. A. V. B. Lockrow, secretary of the delegation, and consisted of an abstract of the proceedings with reference to questions in which the Medical Society of the County were specially interested.

Dr. A. Jacobi, Ex-President of the Medical Society of the State, then presented the subject-matter of "Legislation Looking to the Protection of Factory Children," and offered the following resolutions, which were unanimously adopted:

"*Resolved*, That the Medical Society of the County of New York recommends and insists upon the passage of a bill protecting all children under a certain age, and all those of unsound body, from employment in factories, and urges upon the Legislature of the State the necessity of preventing the physical and intellectual deterioration consequent upon premature factory labor, which will unavoidably cripple or decimate the laboring population of the Republic in all the future.

"*Resolved*, That the Committee on Legislation of the Medical Society of the State of New York be requested to present a suitable bill to the Legislature of the State of New York."

Dr. Jacobi also presented the subject-matter of "Legislation Looking to the Establishing of Special Hospitals for Scarlet Fever and Diphtheria," and offered the following resolutions, which were seconded by Dr. Woolsey Johnson, Health Commissioner, and unanimously adopted:

"*Resolved*, That the Medical Society of the County of New York declare as follows:

"That both scarlatina and diphtheria are highly dangerous diseases, even in their mild forms;

"That they are intensely contagious, and that a mild case may communicate a severe form to others;

"That the poison is intensified by the patient remaining in the same room through the whole course of the disease, and by the accumulation of a number of cases in the same room;

"That the best protection of those still well is the removal of the well, or the strictest isolation of the sick;

"That this strict isolation, and the great care required in the treatment of these cases, are not at all obtainable for the great majority of the patients in a large city full of tenement houses, and are so with

difficulty only, and at a great extra expense, in the residences of well-situated families;

"That therefore public institutions must be established for the purpose of admitting diphtheria and scarlatina cases, and are urgently required;

"That any delay or loss of time in transferring patients from their homes to such an institution may be, and certainly in many cases is, fatal;

"That such an institution must therefore be located within the city limits;

"That such an institution is not in the least dangerous to the neighborhood, in fact, not more so than a fever-stricken private residence is to its neighbors, in consequence of the easy diffusion of infecting poisons when carried away by the air, the infection rather adhering to solid bodies (fomites).

"That such institution, when suitably adapted to various purposes and claims, will prove a blessing not only to the poor, who are directly benefited, but also to the rich, who will learn to prefer the recovery of their children in a hospital to their death in their infected homes; to the community, which will count a smaller number of infected and infecting places; to society, which recognizes the right of life and health; to humanity, which shudders at so much young life wasted and bright hope blasted; that this society, and every individual member, will favor and support every feasible plan to accomplish the end in view, and that the Comitia Minora are directed to report on ways and means."

The Secretary then read the following communication from the New York Medico-Chirurgical Society, which was accepted and ordered to be entered upon the minutes:

"*Resolved*, That, as a society, we avail ourselves of this, the first opportunity, to formally express our satisfaction and unreserved concurrence with the action of the last annual meeting of the New York State Medical Society, in reference to the question of medical ethics.

"It has thus adopted a standpoint which we, individually and as a society, have always earnestly advocated, and it seems to us that no other attitude is consistent with a disposition to honest investigation and true science.

"We think it self-evident that any organization which requires belief or disbelief, or any specified method for the practical application of knowledge as a qualification for membership, thereby rejects the very essential of a scientific standing, and can have no claim to such consideration."

The Secretary announced the appointment by the President of Dr. Charles S. Ward as Chairman of the Committee on Ethics, in place of Dr. James R. Leaming, who was unable to serve the society in that capacity.

The society then adjourned.

THERAPEUTICS SIMPLIFIED.—"There is not a student," says Raspail, "who does not remember how Bosquillon, physician to the Hotel Dieu and an apostle of simplicity in therapeutics, said to his students, as he entered the wards one morning: 'Well, gentlemen, what shall we do to-day? Hold, we will purge every one on the right side of the ward and bleed every one on the left.'"

The anecdote suggests that of the Jewish physician, two hundred years ago, who said to Lord Bacon: "Your English physicians are like the bishops: they hold the keys which bind and loose."

Correspondence.

A NATIONAL EXAMINING BOARD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: There seems to be such an honest determination to raise the standard of medical education and examination all over the country, that there appears to be no good reason why a national medical examining board should not be immediately organized.

The Medical Corps of the Army and Navy are excellent bodies from which to select members who would be *independent*, *unprejudiced*, and *self-sustaining*, but I would also suggest that the American Medical Association—representing the profession in the United States—be empowered to select or elect medical men of known ability to serve as civilian members of such examining board. As our country is so large, and as medical examinations take place about the same period of each year, candidates would be saved much time, trouble, and expense, if the "board" was divided into four examining bodies—say of four or more members each—so that examinations could be held simultaneously, North, South, East, and West.

The medical officers of the board would not receive any additional pay, but one-half or one-fourth of the members who would be civilians should receive the same compensation (while on duty) as members of the National Board of Health, to which office all returns should be made. Examinations should be made obligatory upon all physicians and surgeons who have been less than ten or twenty years in reputable practice, and a national diploma or certificate might be issued, which would not interfere with the usual collegiate examinations or degrees, but would be simply an *independent* testimonial of medical proficiency, that would soon be eagerly sought after by all men who desired a higher certificate of medical standing than it is now possible to obtain.

NAVIS.

MEDICAL NOTES ON EASTERN AND SOUTHERN ASIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Twenty years ago, notes on the climate, sanitary condition, and diseases of this section of the globe, would have possessed but little interest for others than students of geographical medicine. The opened Suez Canal, however, and the impulse thus given to steam navigation of the heretofore remote seas of the East, has been followed by a corresponding increased flow, to the countries bordering on them, of representatives of Western nations, as merchants, missionaries, and travellers, and their congregation into numerous and flourishing settlements which a quarter of a century ago had no existence.

Under these circumstances we have ventured to assume that a few notes "by the way" on the sanitary and general health conditions of some of these communities would not be without interest to many of the readers of the RECORD, many of whom, undoubtedly, have friends or acquaintances who have taken up their abodes in these parts.

Beginning with Japan as our natural starting-point, we have to describe it as a group of islands stretching along the eastern coast of Asia, from the thirty-first to the forty-first parallel of north latitude, corresponding to that portion of the United States lying between Concord, N. H., and Charleston, S. C. The general character of the climate, however, especially on the Pacific side of the larger islands comprising the group, is milder and more equable than our own in the same latitude. Thus, the most northern portion of Niphon has an average mean temperature of Washington, while Kiushiu, the most southern island of the empire, does not differ materially in its climate range from that of the Carolinas. Of the five open ports where foreigners reside, one is located near each of the two extremes above mentioned, while the other three are nearly midway between them.

All these, with the exception of Tokio, are situated on deep bays at the foot of high ranges of hills or bluffs, the sides of which afford beautiful and picturesque sites for residences, while the narrow bit of land below is occupied by the warehouses and docks of the traders. Though a large native town is in close proximity to each of these settlements, they are sufficiently separate and distinct not to affect the sanitary condition of the latter. Taken as a whole, I believe the climate of Japan can be surpassed by no country in the world.

The seaport of Yokohama, which contains twice as many foreign inhabitants as all the others together, necessarily furnishes the largest field for observation of the effect of the climate on them, and of the class of diseases to which they are most liable. Mild and equable as we have already described the climate to be, it is enervating and debilitating to the great majority of foreigners who come here to reside. This may be ascribed not so much to the excessive high range of temperature at any one time, but to the long continuance of the summer heat, and the mild character of the winters. Even the air of the lowest temperature is moist and wanting in that bracing quality necessary for healthful invigoration and recuperation. Ladies, and especially those bearing children, feel this most sensibly. This is seen in their inability to nurse their offspring, in a majority of cases, for more than three or four months, and even then but insufficiently. It not infrequently happens, too, that from the very start the supply of milk is so small and poor that artificial feeding is necessary. They "get up" slowly after confinement, and a discolored uterine discharge either continues much beyond its usual time, or, when it has ceased, reappears from slight and apparently insufficient causes. A somewhat curious fact I have often noticed is, that the mother's milk, though it may be abundant, disagrees with the child, producing indigestion, colic, and diarrhœa, which is relieved only by weaning or artificial feeding. The cow's milk of the country, though from foreign stock, is in many cases also badly borne by children born here. I think I may safely say, that children thrive as a whole much better here on "condensed milk," with barley, rice, or oatmeal water, than on either the mother's or fresh cow's milk.

In nearly twenty years of family practice here, I have never seen a single case of puerperal fever. Puerperal malarial fever is, however, very common, eight out of ten of all my parturient women requiring quinine during the first fortnight. In some cases, the fever has been accompanied by profuse uterine hemorrhage, coming on some days after the cessation of the ordinary discolored discharges. This brings me to the notice of malarial affections generally, as met with in this country. So varied are its manifestations here, both in natives and foreigners, that we might easily devote several pages to its consideration.

We shall, however, defer this, and briefly notice now some facts of general interest bearing upon this subject.

The extensive cultivation of rice in Japan suggests at once the prevalence of malarial affections as a natural result. The great variety of forms which malarial poisoning assumes when acting upon the animal economy are too well known to need mention here. Still, all medical men in Japan have been impressed with what may be called the peculiarities of its manifestations, which were to be clearly understood and appreciated only after some years' residence here. Frank, quartan or tertian ague is rarely met with, and the fatal congestive form is still more uncommon, except in children (Japanese), many of whom die with symptoms of cerebral disease, clearly traceable to malarial origin.

In these cases, the hypodermic injections of the bromide of quinine I have found to act with great promptness, and, when properly administered, saves a majority of otherwise fatal cases.

In a word, the vast majority of all malarial affections assume what are known as masked forms, often completely defying a correct diagnosis without a *trial of quinine*.

Acute inflammatory diseases of all kinds are very rare among foreigners in Japan. Dysentery and diarrhœa, except of a very mild form, are also rare among the well-to-do. Filth and infectious diseases are by no means common. In fact, there has not been a single case of small-pox, measles, or scarlet fever in the town of Yokohama, among foreigners or natives, for over five years, which has not been imported.

Indeed, it is exceedingly doubtful if scarlet fever exists in Japan at all, except in a very mild form, which may be due, however, to its being mostly below the isothermic line of the prevalence of the disease elsewhere.

Malignant diphtheria among foreigners is also rare, the whole number of cases in over two hundred families during the last six or eight years not exceeding five or six. The foreign settlements of Japan may, in fact, be regarded as an asylum of safety for children, as in the space of six years I have in my own practice lost but two children, and those in a weakly family. I think the rest of the profession here have had about the same experience. Among the fatal diseases aneurism ranks first, more deaths having occurred from this than any other one cause. Cholera, though prevailing epidemically for three successive years in all the open ports of Japan, claimed as its victims but very few foreigners, not over a dozen in all.

Of the general healthfulness of the Japan ports, no better proof is wanting than the fact that they are the sanitaria of the vessels of war of all nations cruising in Eastern Asia.

The English and German Governments have both finely located naval hospitals here. Even the United States has one, it being the only instance, we believe, where our Government owns a foot of ground or a building out of her own domain.

DUANE B. SIMMONS, M.D.

YOKOHAMA. JAPAN, January, 1882.

QUESTION OF REFLEX DISTURBANCES FROM GENITAL IRRITATION—A REJOINDER TO DR. SHAFFER.

To the Editor of The Medical Record.

Sir: I shall take up but very little of your space this time.

The following is Dr. Shaffer's only attempt at proof of his statements about my alleged plagiarism: "Those who have read Dr. Gray's essay and my papers will plainly see wherein he has followed me. *Those who have not done so would scarcely be entertained by a long series of quotations from the subject-matter of our papers. It would be a very easy matter, however, to establish the identity of ideas by direct quotations.*"

In other words, Dr. Shaffer, having made a grave attack upon me without any detailed proof, is met by what I claim to be the only proof in the matter, and shirks the issue by the above evasions; and then proceeds to fill two of your long columns with what he thinks will be of more interest to your readers than a substantiation of his original allegations.

Dr. Shaffer asserts that I made no allusion to his papers. He does not seem to have read my reply—indeed, this is noticeable throughout his letter—and therefore forces me to repeat. In the *Annals of Anatomy and Surgery*, January, 1882, p. 40, he will find the following sentence: "Dr. Newton M. Shaffer has expressed the same opinion"—*i.e.*, of having never seen a case of reflex paralysis from genital irritation—"in a late article." In the February number of the *Annals*, p. 78, he will also find, as I stated in my former reply, that I have said: "The patient usually obtains rest, as has been suggested by Dr. Shaffer."

I merely call attention to Dr. Shaffer's admission that he made use of his privileges as editor to attack a paper as yet unpublished, but about to be published in his own journal, and prejudice the profession against it in advance.

Dr. Shaffer might as well lay claim to being the founder of the English language as to affirm that with him originated the idea of reflex paralysis being due to organic disease. My warrant for this assertion is contained in my former reply.

As to all the other quibbles, clouds of words, upheavals of immaterial finicalities, repetitions, explanations, and defences of that curious lateral sclerosis with ataxic movements but without ataxia, and yet with muscular inco-ordination, Dr. Shaffer is, so far as I am concerned, quite welcome to all the benefit that may accrue to him from them.

Very truly yours,

Landon Carter Gray.

Brooklyn, February 18, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 19, 1882, to February 25, 1882.

Moffatt, Peter, Capt. and Asst. Surgeon. Relieved from duty at Camp Spokane, W. T., to proceed to Fort Cœur d'Alene, Idaho, and relieve Asst. Surgeon Spencer from duty at that post. S. O. 20, Department of the Columbia, February 11, 1882.

Finley, J. A., Capt. and Asst. Surgeon, Fort Adams, R. I., granted leave of absence for one month. S. O. 29, Department of the East, February 20, 1882.

Spencer, William G., Capt. and Asst. Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month, to Division Headquarters, and for an extension of four months to the Adjutant-General of the Army. S. O. 19, Department of the Columbia, February 10, 1882.

Raymond, H. I., First Lieut. and Asst. Surgeon. Relieved from duty at the Presidio of San Francisco, and assigned to duty at Alcatraz Island, Cal. S. O. 28, Middle Division of the Pacific and Department of California, February 15, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 25, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Feb. 18, 1882.	2	7	303	6	228	112	51	0
Feb. 25, 1882.	2	7	229	10	197	107	44	0

The Next International Congress, which is to meet in 1883, at Copenhagen, has already begun its organization. Professor Panum has been nominated President, and Carl Lange secretary.

Iodine in Acute Malaria.—Dr. Robert B. Morison reports the result of using iodine for acute malaria at the University of Maryland Dispensary. Fifteen minims were given three times a day, in a mixture largely diluted. It was given in 250 cases, of whom 100 were heard from a second or third or more times. Of these, 84 are on record as cured, 2 cases not cured, and 14 cases not cured by iodine or the cinchonidia mixture of the dispensary.

Another Successful Gastrotomy was recently performed by Prof. Albert, of Vienna, upon a boy aged eleven, who suffered from stricture of the œsophagus, brought on by swallowing caustic potash. The case was exhibited before the Society of Physicians in Vienna.

Professor Kundrat, of Gratz, will, it is said, be appointed to the Chair of Pathological Anatomy in Vienna, formerly occupied by Rokitansky. Prof. Klebs, of Prague, a disappointed candidate, has received a call to Zurich. Ziegler, Professor of Pathological Anatomy of Zurich, has accepted a call to Tübingen. Professor Trendelenburg, of Rostok, has accepted the chair at Bonn held by the late Prof. Busch.

Burning of the Kings County Insane Asylum.—A fire in the easternmost wing of the Kings County Insane Asylum last week resulted in the partial destruction of the building, the death of two inmates of the asylum, and the serious injury of one of the employees.

There were 333 inmates of this wing, and 175 in

the part where the fire caught. The alarm was given early in the morning, when the patients were at breakfast. Strange to say, no panic was excited among the patients, and the wards were cleared in a very short time. One of the insane patients, named Stearns, rushed into a burning ward and rescued a bedridden patient. One of the patients who was killed was bedridden and speechless. In the haste and confusion he was overlooked by the attendants. The other person killed was a very excitable patient, who suffered from epilepsy. It is thought that fright may have been partly the cause of his death.

Dr. Shaw thinks the fire might have been prevented and the two lives saved had the Supervisors done as he has repeatedly requested them to do—furnish stand-pipe and hose on each floor of the building, for use in case of fire.

The Health Officer's Fees.—It has been decided that, although the Health Officer of this port gets excessive fees, yet these fees cannot be utilized for the support of quarantine. Consequently, an effort is to be made to reduce the amount of fees fifty per cent.

New Remedies for Bright's Disease.—Dr. S. Neumann, assistant to Prof. Schrötter in the Vienna Hospital, reports upon the use of fucusin, amyl nitrite, and pilocarpin in Bright's disease. He found them all of very little use.

Gray's Anatomy has been translated into Chinese and published in six volumes at Foochow.

Nutrient Suppositories.—Mr. H. E. Spencer recommends the use of nutrient suppositories for administering food per rectum. Artificially digested meat is mixed with a little wax and starch and made into a suppository. These suppositories are of such size that the digested and soluble part of twenty ounces of lean meat is contained in about five suppositories. Mr. Spencer has used them successfully for a fortnight and over.

A Dental Department has just been added to the University of California.

Morphine in the Treatment of Puerperal Eclampsia.—Dr. George W. Orr, of Central Mine, Mich., sends us the history of a case which illustrates very pointedly the efficacy of morphine, at times, in puerperal eclampsia. Dr. Orr's letter was suggested by the report of a similar case by Dr. Cooley in the Record of December 24, 1881.

The patient in question was a primipara, aged 19, who had been in labor for several hours, with very little progress made. Dr. Orr was then summoned in haste and found her in convulsions. He administered chloroform freely, and exerted every effort to dilate the os, with but little success. Dr. Lanbaugh was sent for and arrived late in the afternoon. Despite all efforts the patient had twenty-two convulsions. At six o'clock Dr. L. suggested morphia sulph., and a fourth of a grain was given hypodermically. She immediately dropped off into a quiet sleep, which was continued for nearly an hour. The os was then found to be soft and yielding. As the patient was becoming restless, one-fourth of a grain was again administered and soon after she was delivered of a small male child. She was then resting well. Dr. Orr remained the greater part of the night, and administered sal. brom. and chloral hydrate at irregular intervals. She had no convulsions after morphia was administered. Her recovery was rapid and complete.

M. Paul Bert has established at the Collége de France a Laboratory of Physical Biology. MM. Brown-Séquard and d'Arsonval have been appointed directors.

Hydrobromic Acid in Fever.—Dr. D. W. C. Wade, of Holly, Mich., writes: "Will you have the kindness to publish the following:

"From The Medical Record, February 18, 1882: 'Simple Continued Fever.—℞. Acid. hydrobrom., ʒj.; syr. simplicis, ʒij., aq. ad. ℥j. M. Sig.—Every hour.—*Fothergill.*

"'Dr. Fothergill, in speaking of the above formula, says it will probably constitute *par excellence* the fever mixture of the future. It is especially indicated when there is cerebral disturbance.'

"From the *British Medical Journal*, July 8, 1876; *Braithwaite's Retrospect*, January, 1877:

"'Bromohydric acid. By Dr. J. Milner Fothergill, Assistant Physician to the West London Hospital, etc. The utility of the bromide of potassium is now generally acknowledged by the profession, and its effects upon the nervous system are often of the greatest service. At the same time, it is not readily combined with several agents with which it may be advantageously administered, as quinine, for instance. Last year I abstracted for the London *Medical Record* (April 20, 1875), a paper by Dr. DeWitt C. Wade on this agent, which appeared in the *Peninsular Journal of Medicine* (Detroit), in February, 1875. He described there the usefulness of bromohydric acid, especially in obviating the headache which is produced in some persons by quinine. From what he said, I handed over his paper to the dispenser of the West London Hospital, and commenced to prescribe the new remedial agent. . . . I will therefore briefly relate the conclusions arrived at after a twelvemonth's experience of the drug. . . . Dr. Wade states that it is useful in the treatment of fever. It would seem the acid *par excellence* where there is much cerebral excitement in pyretic affections, but of this I have no personal experience.'"

Anæsthetic Mixtures.—The Vienna mixture, with which eight thousand operations have been performed without an accident, consists of ether, 3 parts; chloroform, 1 part. Billroth's favorite anæsthetic mixture is chloroform, 3 parts; ether, 1 part; alcohol, 1 part. An English mixture, known as the A. C. E. mixture, consists of alcohol, 1 part; chloroform, 2 parts; ether, 3 parts.

Owing to the different volatility and specific gravity of the various anæsthetic liquids, the vapors have, necessarily, a different composition from that of the mixtures themselves. The value of a mixture must therefore, in part, be determined empirically. Some experiments have been made in the mixing of heart-stimulants with chloroform. Sanford mixed one pound of chloroform with two drachms of amyl nitrite. Others have added oil of turpentine to the chloroform. The objection so far has been that such mixtures cause a headache.

The "Lady Fever."—Dr. J. C. Neal, Archer, Fla., writes: "Dr. Garrison's account of the 'lady fever' in Arkansas, moves me to record the occurrence of the name as used in this section of Florida, by the blacks, for gonorrhœa and syphilis—the light form of gonorrhœa being called, usually, 'running range.' The first stages of 'lady fever' are rarely seen by medical men, for not until there is orchitis, dysuria, buboes, or ulceration, do the ne-

groes resort to the doctor, and the results of disease, dirt, and neglect are often horrible in the extreme. A short time ago, an old negro came to me with a savage conjunctivitis. 'Uncle,' said I, 'have you had the lady fever lately?' 'Why, bless you, Mars Doctor, you done knowed dat, who tole you?' and he uncovered a frightful ulcer in the left groin, embracing nearly all of Scarpa's triangle; and the old sinner coolly averred, he 'done lifted, dat brung it onto me.' The colored clergy are too often the propagators of this trouble. In fact a prominent colored politician once remarked: 'Sinner man come to my house when I'se gone; all right, but I don't want no black preachers to fotch lady fever to kill me out.' We see more cases of syphilis among the blacks than all other diseases combined, and with unbridled passions, unrestricted intercourse, bastardy no disgrace, and 'lady fever' almost epidemic, it would seem almost certain that the blacks will repeat the history of the Sandwich Islanders. Already we see a greater number of deaths in infancy than prior to 1865, more weakly black children, and a marked increase of diseased teeth among the younger negroes—showing a tendency to retrograde physically. In most of these cases of syphilis, I have found small doses of barium chloride, with decoction of stillingia, especially valuable, being certain, cheap, and safe, qualities that recommend themselves to my medical confrères in the South, where such cases are so frequent as to be a burden of expense to the charitably inclined."

Do Pet Animals Communicate Contagious Diseases?—Dr. William Bunce, of Oberlin, O., sends us a report of the following cases in support of the theory: "Pet Animals may be the Means of Spreading Fatal Diseases." On May 1, 1881, he was called to see a boy four years of age, of German parentage, and one of six children; he was found to have diphtheria. On the following day the youngest daughter, two years of age, presented symptoms of the same disease, and on the next day the father and two more children were attacked. After this date all the other members of the family, except the oldest boy, contracted the disease. A thorough examination of the house elicited no source of contagion, but in the barn a cat was found having the characteristic lesions of diphtheria. On inquiry, he ascertained that this cat during its period of sickness had been played with by the children. On August 20, 1881, he saw, with his son, Dr. W. C. Bunce, a lady, eighteen years of age, who had diphtheria of a very severe type, which terminated fatally on the third day. In a short time the disease developed in the mother and remaining two daughters. A half-grown cat in the room was found to have well-marked diphtheritic membrane in its throat; it was also ascertained that its mother and her four other kittens had been in the same condition. The girls had endeavored to cure the cats by removing the deposit, in this way exposing themselves to the contagious influence of the disease. After the recovery of these cases, and the removal of the diseased animals, the spread of the disease ceased. He thinks it fair, therefore, to conclude that the diseased condition of the cats was the cause of the diphtheritic manifestations in the cases reported. Mention is made of these cases as they are of importance in the consideration of comparative medicine.

Do Southern Hogs Have Trichinæ?—An investigation, which seems to show that Southern hogs do not have trichinæ, was made by Dr. Jansen T. Payne last summer. His report was submitted to the American Public Health Association at its last meeting. In six months Dr. Payne examined 5,400 hogs, finding only 22 infected with the parasite in question.

The infected animals were reported as having been received from the following places: St. Louis, 18; Louisville, 2; and from the West, marked "unknown," 2; making a total of infected hogs, 22.

Of the hogs examined, only 529 came from St. Louis; most of them came from Louisiana (2,473) and Tennessee (1,060).

The observations lead to the belief, therefore, that Southern-bred hogs are free from trichinæ. Still, such a deduction is not absolutely safe. If the fact were really proved, it would be one of great advantage to Southern pork-raisers. Even as it is, they can profit from the fact that Tennessee and Louisiana hogs are almost entirely free from disease.

Incidentally, some other facts regarding the origin and communicability of trichinosis were developed. Observations seemed to show that hogs infect each other when enclosed in the same pen, and do not depend upon the rat as an intermediate host. The parasite is passed out of an infected animal along with undigested food, and the food is then eaten by a sound hog, who in turn becomes infected.

By Dr. Payne's examinations it was also ascertained that all the hogs infected with trichinæ were corn-fed animals. No mast-fed animal was found to be infected.—*Journal of Comparative Medicine.*

Ectropion Successfully Treated by Transplantation of the Skin from the Forearm.—Mr. L. H. Tosswill, of Exeter, England, reports (*British Medical Journal*) the case of a boy, aged ten, whose face had been horribly disfigured by a burn. He had so much ectropion of both lids of the left eye, that the cornea could not be covered. Two large skin grafts were made from the arm to the eyelids. They grew, and the ectropion of the upper lid was perfectly cured. That of the lower is much improved. Another operation will doubtless restore the lids completely.

A few similar operations have been done in this city.

The Dangers of Nerve-Stretching.—Five fatal cases of nerve-stretching for locomotor ataxia are reported. One by Socin, one by Langenbeck (who originated the operation), one by Billroth and Weiss, one by Berger, and one by Benedict. In these cases it appeared as if there had been some violence done to the spinal cord and medulla, *e.g.*, vomiting, singultus, paralysis of bladder, etc. Dr. Althaus considers it an unsafe measure when there are cardiac or respiratory diseases.

The Salicylates in Rheumatism.—A discussion upon the value of the salicylates, salicin, and salicylic acid in rheumatism, in London, recently, led to the production of statistics which seemed to show that the drug increased the possibility of heart complications, and that, though it diminished the first violence of the disease, it left obstinate joints afterward.

In a recent letter to the *British Medical Journal*, Dr. Chas. Orton speaks up for the salicylates, and calls attention in particular to their local application. He soaks lint in a solution of salicylate of soda, applies it to the affected joints, and covers the whole with oil-silk.

Original Communications.

THE PERMANENT REMOVAL OF HAIR BY ELECTROLYSIS—REPORT OF CASES.*

By GEORGE HENRY FOX, A.M., M.D.,

CLINICAL PROFESSOR OF DISEASES OF THE SKIN, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

The growth of hair upon the female face, to the treatment of which I again invite attention, is a deformity which is very frequently observed. Perhaps few physicians have an adequate idea of its prevalence. In nearly every "museum of living curiosities" a bearded woman figures as one of the chief attractions, and it is quite probable that but a small proportion of bearded women are willing to advertise their misfortune for pecuniary gain. I think there are at least a half dozen of this class on exhibition throughout the city. Of the number of ladies in private life, who endeavor, by artifice of various kinds, to conceal the unpleasant fact that they have, or might have a beard, it would be very difficult to form an estimate. I have no doubt that there are hundreds of such cases. I speak now merely of those who might raise a thick and long growth of hair which would deserve the name of beard. Of those who have a comparatively moderate growth upon the face, and particularly upon the chin, the number is beyond computation. We note instances of this hypertrichosis on every hand, in the drawing-room, upon the street, or wherever ladies congregate, and could we but know the secrets of the *boudoir* we would be surprised to find how large a percentage of our female acquaintances resort occasionally, if not habitually, to the use of the depilatory, the razor, or the tweezers.

Frequently the opinion and advice of the physician is sought respecting this abnormal and obnoxious growth—and what does he say? In all probability he will tell the patient that depilatories are merely palliative, advise her to pull the hairs out or to let them alone, and declare that it is a very trifling matter, and perhaps add jocosely that it is not likely to cause death. Such an opinion never satisfies the patient, for no woman ever yet derived consolation from the fact that ugliness is not fatal. Furthermore, the opinion is not sound. This abnormal growth of hair is not always a trifling matter. It may not kill the patient, it is true, but it is certain to occasion great annoyance. It is very apt to affect her disposition, and to injure her prospects in life, especially if she be young and unmarried; and it may eventually ruin both her health and her happiness by producing a mental disquietude which in many instances verges on melancholia. The frequent occurrence of facial hairiness among insane women has been observed by several writers, and although in such cases the insanity has usually preceded the abnormal growth of hair, I have no doubt that in many instances the mental worry caused by slight facial hairiness has acted as an exciting cause, and served to develop an insane tendency. Dr. J. C. White mentions the case of a lady who searched long for a surgeon who would flay the lower part of her face, and thus remove the obnoxious growth. I have certainly treated one or two females who were monomaniacs on the subject of their facial hairiness, even when this has been very slight, and the most satisfactory result of treatment in these cases has been the improvement in general health which has followed the removal of the hair, which served to make their lives unhappy. (See Case I.)

Of the advances which dermatology has made in recent years, the development of the operation for removal of hair is without doubt the most brilliant. In the *Archives of Dermatology*, five years ago, my friend Dr. Duhring, of Philadelphia, reported the case of a bearded woman, whom many of you have doubtless seen on exhibition, and after an exhaustive description and discussion of interesting points concluded with the following paragraph: "In regard to the question which was asked me by the patient, whether the growth on the face could be successfully and permanently removed (and I need not add that it is to her a source of intense mortification and distress), I would say that the only justifiable means at our command is palliative, consisting in either the daily use of a razor or in the employment of a depilatory powder." This was written only five years ago, and represented advanced opinion at that time. I quote it simply to show that dermatology in America is not a mere reflex of European thought, but that it is alive and advancing.

In a paper read before the Fifth Annual Meeting of the American Dermatological Association, Dr. Heitzmann mentioned the case of a lady with a growth of hair upon chin and submaxillary region, who had consulted the prominent dermatologists in Vienna. All agreed that no one would promise a permanent eradication of such superfluous hairs but a regular charlatan. In the light of what has been accomplished by several in this country, it is apparent that, in one respect at least, we are in advance of our dermatological brethren abroad, who, as Dr. Heitzmann remarks, do not know anything about permanent and safe epilation.

The operation for the permanent removal of hairs by electrolysis, has been described by several who have written on the subject, and the descriptions differ merely in a few non-essential points. The operation is a simple one, which any physician with a steady hand and keen eye can readily perform, although, as in many other simple operations, a peculiar dexterity is required, and far more satisfactory results are obtained after a certain amount of experience. An ordinary galvanic battery is required and a fine needle, which is to be attached to the negative cord. The number of cells required for the operation depends upon the activity of the battery, the delicacy of the patient's skin, and the strength of the hairs to be removed, and should be determined in each case by the effect which is produced. I commonly use from ten to sixteen cells of a zinc-carbon battery, or a corresponding number of a chloride of silver battery.

Upon the style of needle employed depends, in a large measure, the success of the operation. A fine cambric needle, which has been recommended, may be successfully used, but on account of its stiffness it is more difficult to introduce it into the follicle without piercing the follicular wall than the hair-like flexible steel broach which I have recommended and invariably use. The cambric needle being larger is also productive of more inflammatory reaction, and more likely to leave permanent traces of the operation. Formerly I used a very fine platinum wire, pointed by means of a jeweller's file, but the delicate flexible broach, much finer than those commonly employed by dentists in extracting nerves,

* Read before the Medical Society of the County of New York, February 27, 1882.

is far superior to any other needle which I have ever seen, and is almost a necessity in removing the hairs from the upper lip without the production of a scar. The needle can be readily attached to the end of the battery cord by a few turns of copper-wire protected by an inch or more of rubber tubing, or a special handle may be made for the purpose.

Provided with battery and needle the next thing is to get the patient in a proper chair and in a proper light. A high reclining-chair and a southerly bay-window are desirable, but the main point is to secure sufficient light and to have the operator's eyes upon a level with the patient's chin. The needle is now introduced into the follicle by the side of the hair. If this is skilfully done, no pain whatever is felt by the patient. The sponge-cup or sponge-tipped positive electrode should now be used to complete the circuit. This may be applied to the skin in the immediate vicinity of the hair if but a few cells are used, but it is usually more convenient to allow the patient to hold the positive electrode in one hand, and when the needle has entered the follicle, to ask her to complete the circuit by applying the moistened sponge to the palm of the other hand. The electrolytic action now manifests itself subjectively in the form of a sharp stinging sensation, and objectively in the form of slight hyperæmia around the needle. In a few seconds the hyperæmia will give place to a blanching of the skin, and a little froth will appear at the mouth of the follicle. If the hair be now seized with a pair of forceps and the gentlest traction exerted, it will be found to be loose in the follicle in the course of from ten to twenty seconds, provided the needle has been skilfully introduced. Before withdrawing the needle the patient should remove her hand from the sponge, in order to avoid the slight shock which would otherwise be felt.

In a paper on this subject which I read before the New York State Medical Society, three years ago,* I recommended the extraction of the hair before introduction of the needle where the follicles were of large size. Under no circumstances, at the present time, do I ever remove the hair until it is loosened by means of the electrolysis. In the paper mentioned I wrote as follows:

"The first effect of the operation is to produce a small whitish elevation around the mouth of the follicle—in fact an urticarial wheal. After a protracted sitting, the part operated upon will be acutely congested and somewhat swollen, and the number of hairs operated on can usually be determined by gently passing the finger over the skin and counting the number of small lumps resulting from peri-follicular exudation. On the following day the diffused congestion will have disappeared and left a number of red papules or small pustules at the mouths of the follicles."

At that time I was in the habit of using a much coarser needle than I do at present. With the finest flexible needle it is extremely rare to produce wheals or pustulation. In many cases the effect of the operation is simply to leave red points, which soon disappear.

The operation is by no means a pleasant one, but rarely does a patient make any complaint of pain. The majority say it is not as unpleasant as having teeth filled in a dentist's chair, and with the fine needle the painful sensation is greatly reduced. At the first sitting the patient is often nervous, and suffers really more than in a dozen subsequent operations. When the sitting is prolonged, and especially in a poor light, the removal of the hair is very trying to the eyes of the operator. At certain times I know that I have suffered quite as much or even more than the patient. The use of a lens held in the hand or fixed before the eye has been suggested, but for my part I find one of no value. A delicacy of touch and steadiness of hand, is more essential in this operation than an unusual keenness of vision.

As to the number of hairs which can be removed at one sitting, I would say that from thirty to fifty is the number which I usually expect to destroy in an operation lasting three-quarters of an hour. Upon the neck it takes much longer to destroy hairs than upon the chin or cheeks. I have removed over two hundred hairs at one sitting, when patients from a distance were anxious to leave the city; but I deem it far better to spare one's eyes and to be more thorough, even if it involves a greater number of sittings.

If the operation is very skilfully performed, it ought not to leave scars, as a rule. In some cases it is impossible to prevent the production of minute punctate cicatrices, which, however, can only be seen on close inspection. I made a mistake in some of my earlier cases in operating upon two or more coarse hairs very close together, instead of taking one here and there at short distances apart. (See Case XI.) A little attention to this hint may serve to prevent the production of slight scarring by those who may attempt the operation. Here again I must refer to the fine needle, for its use greatly lessens the liability to the production of scars.

As regards the immediate success of the operation, it must be stated that, as a rule, a certain percentage of hairs will return and demand removal a second time. I used to expect a return of from thirty to fifty per cent. of the hairs, while now I am surprised if from five to ten per cent. reappear. In one case (XII.), in which I removed over fifty hairs with unusual care, not a single one has returned after an interval of three months. In some patients the growth of hair appears to have ceased, for some unknown cause, and when the hairs are destroyed the cure is effected. In other patients the fine hairs are constantly growing larger and darker, and after the most conspicuous have been removed a new growth will in time succeed, and appear, perhaps, like a return of those previously removed. (See Cases III., IV., VIII.)

In this operation for the permanent removal of hair the question arises as to how the electricity destroys the papilla from which the hair springs. Is it by thermic or by electro-chemical action? A recent writer on the subject objects to the use of the term electrolysis as being a misnomer, claims that the heat generated in the needle by the passage of the electricity is the active agent in the destruction of the tissue, and suggests for the operation the name of *akido-galvano-cautery*. It cannot be denied that in this operation the temperature of the needle is slightly raised by its resistance to the galvanic current, but surely not to such a degree as to produce a caustic effect. On the other hand, it is evident, from the frothing seen at the mouth of the follicle and other effects, that a decomposition of the water and salts contained in the cutaneous tissues is taking place around the needle and causing the escape of bubbles of hydrogen. This is certainly nothing more nor less than electrolysis.

In conclusion, I would like to refer to the cause of

* New York Medical Record, March 22, 1879.

facial hirsuties in females, and I shall speak briefly on this point, for I know very little about it. I have wondered and pondered by the half-hour while operating on cases, and endeavored to find some characteristic common to all of my patients, but in vain. Some are in fine physical condition, while others are debilitated. Some are extremely nervous; some are not so in the slightest degree. Some are stout and others thin. Some are of dark and others of light complexion. Some are maidens from twenty to fifty years of age; while of others who are married, some have children and some have none. The somewhat common idea that the growth of a beard in the female is necessarily associated with masculine traits of character is certainly not founded upon fact, for most of my patients have presented the very highest type of feminine refinement. That facial hirsuties is dependent upon a malformation or imperfect development of the reproductive organs, as some have claimed, is, in my opinion, doubtful. Certainly, an intimate relation between these two conditions has not been satisfactorily proven, save in a few exceptional cases.

The relation of facial hairiness in females to derangement of the nervous system is a subject which has already commanded attention, but has not as yet been sufficiently studied. I have already spoken of the depressed mental condition existing in many of my patients, and which I believe to be not merely a result of the disfiguring growth of hair, but a symptom of general nervous disease, upon which the hirsuties in all probability depends. Excessive growth of hair, whether in the male or female, is an aberration of nutrition, and not a sign of excessive vitality. The Samsons of the present day are clean-limbed, and usually short-haired specimens of the human race, and in our highest type of feminine health and beauty there is but a moderate growth of hair. The lady in the museum, whose luxuriant tresses trail upon the floor, is rarely, if ever, well-developed, and, like her bearded sister, furnishes unmistakable evidence of perverted nutrition.

An abnormal growth of hair, whether it be in respect to length or location, indicates an abnormal condition of the nervous system. Precisely what this condition may be, and how it may be remedied, I must leave for others to determine.

In the following report of cases, I have selected twelve of those in which the growth of hair was more or less abundant, and which will serve to illustrate some of the difficulties in the way of treatment, as well as its success.

Case I.—Mrs. ——, aged thirty-one, married at eighteen, and has one child. Is quite stout and in fair health. Is greatly worried by a growth of hair upon chin and neck. Seldom goes out for exercise, but prefers "to sit and mope." Her sleep is often disturbed by the thought of her "misfortune." The patient is almost a monomaniac on the subject of her beard, and most of the time is greatly depressed in mind. The growth of hair upon extremities is abnormal. The facial hirsuties appeared about two years ago, and pulling the hairs out seemed to increase the growth. As a proof that pulling makes the hairs grow stronger, she cites the fact that the hairs on the right extremity of upper lip, which she could pull more readily than on the left side, are now much more developed in size. There is no tendency to hirsuties among her female relations.

Applied for treatment in March, 1880. During the summer I removed over a thousand dark hairs, leaving an abundant growth of fine pigmentless hairs, which were scarcely noticeable at the distance of a few feet. At her urgent request, I continued to operate on these and removed a second thousand or more, most of which were so fine as to constitute no disfigurement whatever, but their removal produced a marked indirect effect upon her health and happiness. In this case about twenty-five hundred hairs were removed by count. How many of these reappeared and were removed a second time it is difficult to say. There was, evidently, a constant tendency for the fine downy hairs to develop in size and thickness, and at times I despaired of being able to effect their removal, but after eighteen months of intermittent treatment, success crowned my efforts, and her chin and neck appeared quite smooth and natural. In January, 1882, I saw the patient, at which time there were no conspicuous hairs, and she stated that she considered the operations to have been perfectly successful and that the results had far exceeded her anticipations.

Case II.—Miss ——, aged twenty-four; a tall blonde, in good health. Applied for treatment in October, 1879, on account of a growth of light hairs on both sides of chin, about an inch in length. She had consulted the eminent dermatologist of London, Prof. Erasmus Wilson, and stated that she had been advised by him not to touch the hairs, and informed that absolutely nothing could be done in her case. Her extremities were quite hairy, and the hair of her head was thick and long. The hair on her chin had mostly grown during the previous year, and after a severe fever. In this case I removed three hundred hairs, operating upon the left side of chin by electrolysis, and upon the right side by the method suggested for the mechanical destruction of the follicle, consisting in the introduction and rapid twisting of a barbed needle. In April, 1880, the patient returned to the city, and I found that nearly all of the hairs upon the right side had returned, while there was a perceptible diminution of the number upon the left side of chin where the electrolysis had been employed. In April I removed one hundred and fifty, and in June one hundred hairs of a finer growth than those first operated upon, which left the face quite free.

Case III.—Miss ——, a young lady, aged twenty-six; tall and of fair complexion; in good health, though delicate in appearance and inheriting a tendency to pulmonary disease. Applied for treatment in December, 1879, on account of hairs growing on either side of chin, which had appeared within three months. There was a very light moustache on upper lip, though scarcely more than is commonly seen. In two operations I removed sixty hairs from right side, and thirty-five from left side of chin.

In May, 1880, about ten of the long dark hairs, previously operated on, appeared to have returned. Removed twenty-five from either side of chin, most of them being fine and light-colored.

In October, the patient reported that she had been free from the capillary growth during the early part of the summer, but during past two months a few fine hairs on either side of chin had rapidly increased in size. These were removed, and as I have recently been informed by a member of her family, there has been no subsequent appearance of the hairs.

Case IV.—Miss ——, aged thirty-two, tall, of blonde complexion, and lymphatic temperament; health good. Applied for treatment in June, 1880, on account of long curling hairs on sides of chin and a mole on

neck. She had been in the habit of pulling them every three weeks. There was no hirsuties of other portions of her body, nor were any female relatives affected similarly. Her hair, a lock of which turned gray at sixteen, appeared quite gray in front, while the back hair was of a natural brown hue. Upon her legs a singular condition had existed for two or three years. The hair upon the tibial region, instead of being normal or in excess, had almost entirely disappeared, and the existence of many follicles, either inflamed or distended by an accumulation of epidermic cells, showed plainly that the loss of hair was the result of the affection which is known as lichen pilaris. The hair upon her chin had been growing for five years or more.

In June and July I removed one hundred and sixty hairs.

In November I removed eighty, much finer than those first operated upon.

In June, 1881, there were but seven to be [removed.

In January, 1882, I removed twenty-five, which were evidently of recent development, and not a return of those previously operated upon.

Case V.—Miss ——, a maiden lady, aged forty-six; tall, thin, and of dark complexion; health poor. Applied for treatment in July, 1880, on account of numerous fine dark hairs upon either side of chin. She had been in the habit of cutting them close or pulling them out, and at the time of her first visit they were about half an inch in length. There was no excessive growth of hair on other portions of the body. The hairs on chin had begun to grow at eighteen years of age, and she stated that a sister and two paternal aunts suffered in very much the same way. During the week in which she remained in the city I removed five hundred of the largest hairs in six operations.

In September she returned to the city with apparently as luxuriant a growth as before, and no indication, at first glance, of any having been removed. Close inspection, however, showed a few red points, especially on upper lip, where hairs had evidently been destroyed. I now removed six hundred in four operations, including many finer hairs, and used a stronger current and far more care in operating than I did at first.

In November the number of hairs was evidently decreased, and I removed less than a hundred.

In June, 1881, there were but a few conspicuous hairs. I removed one hundred more, however, most of them being very fine.

In October there were but seven dark hairs, which I removed with twenty-five downy ones, which appeared as though they might develop and become conspicuous. A few minute cicatrices were visible upon close inspection. The patient has since written to me as follows:

"The result of the operation is very satisfactory. There are no hairs perceptible on lip or chin, and the few scars are not noticeable."

Case VI.—Mrs. ——, a married lady, aged twenty-five; quite stout, of dark complexion, and in fair health. Applied for treatment, in August, 1880, on account of long, dark, curling hairs upon either side of chin, for which she had been recently applying a depilatory. She had a luxuriant growth of hair upon the head, and said that no female relative was affected with hirsuties. The growth of hair upon her face was first noticed at eighteen years of age. She began to pull out the hairs three years ago at long intervals, but more frequently of late. She thinks that the epilation increased the growth, but not so much as did the depilatory powder which she used.

In twelve sittings, extending through a year, I removed four hundred and fifty hairs, one-half of them being quite fine and evincing a marked tendency to develop in size. After a six months' interval the patient writes that the operations have proved satisfactory, although the growth has not been entirely removed, and a little more must be done to make a complete cure.

Case VII.—Miss ——, a maiden lady of forty-six; small, thin, and dark; in fair health, although of delicate appearance. Applied for treatment in October, 1880, on account of dark, curling hairs on sides of chin, and dark hairs at either end of upper lip. The growth first appeared on lip fifteen years ago. This had been treated by applications of sulphuric acid, which had lessened the growth of hair in the centre of the lip, and given it a whiter appearance than the rest of the face. The hair first appeared on chin three years ago. Her mother had four or five hairy moles on her chin.

In October I removed one hundred and twenty-five hairs.

In the following June, 1881, the patient returned to the city and I removed seventy-five hairs. It must not be inferred that over one-half of the hairs upon which I first operated had returned, as in this second operation I removed many fine hairs which had been left.

In November there were but one or two hairs at all conspicuous. These I removed, with a few more fine ones, and the patient returned to her home well pleased with the results of treatment.

Case VIII.—Miss ——, aged about thirty; tall, dark, and of extremely nervous temperament; health good. Applied for treatment, in January, 1881, for a slight growth of hair mostly on right side of chin, which had appeared during the preceding year. She had always noticed a tendency to a slight excess of hair upon extremities, although upon the scalp her hair was rather thin.

At two operations, in January and February, I removed thirty-two hairs from chin and left cheek.

In June there were but five hairs to remove.

In February, 1882, I removed twenty-seven fine hairs, which were evidently a recent development and not a return of those previously operated upon.

Case IX.—Mrs. ——, a married lady, of about forty-five, with no children; tall, thin, and of dark complexion; health poor; applied for treatment in March, 1881, on account of a few fine and long hairs on chin, and a fibrous mole on right cheek, from which a few hairs sprung. She had first noticed the growth of hair about three years before and had resorted to depilatories and epilation. In March I removed forty-five hairs from the chin and inserted the needle at several points around the base of the mole, which was of the size of a split pea. In June, there was scarcely a trace of the mole and no hair on chin, save a few very fine ones which I removed. I have heard through friends of the patient since that the growth of hair was permanently removed.

Case X.—Mrs. ——, a young married lady of twenty-eight; of rather weak constitution, but in fair health. Applied for treatment in April, 1880, with an abundant growth of fine, soft hair on cheeks, chin, and neck, which, if allowed to grow, would undoubtedly have produced a fine, thick, soft beard. The upper lip was free from an excess of hair, and there was no tendency to hirsuties on other parts of the body.

The growth of hair began at the age of fourteen, and there had been no perceptible increase during the past three or four years. For nine years she had been in the habit of pulling out the hairs at intervals of three days, and necessarily devoting a liberal amount of her time to this procedure. Attempts had been made to destroy the hairs by hypodermic injections of carbolic acid, but with no result save the production of a few disfiguring scars. The patient stated that her mother had a remarkably fair complexion, and that no female relative suffered from hirsuties.

During the months of May and June I operated daily, and sometimes twice a day upon the patient's face, and removed upward of five thousand hairs. I operated rapidly—too rapidly, as the sequel proved—and removed from one to two hundred hairs at a sitting.

In October, 1881, the patient came again to New York, and at first glance I could not see that very much had been accomplished. She expressed her opinion, nevertheless, that the operations of the previous year had proven quite satisfactory, inasmuch as they had lessened the growth of hair decidedly. I accordingly resumed the treatment, and with the assistance of Dr. W. S. Conover, removed about one thousand hairs. This left the face much smoother and more free from hair than after the first series of operations.

Case XI.—Miss ——, aged thirty-five; of dark complexion, and in fair health; a teacher by occupation. Applied for treatment in December, 1879, with a thick and strong growth of black hairs on cheeks, lip, chin, and neck. Indeed she would have had as perfect a beard as almost any of the women on exhibition if she had allowed the hair to grow, but for over fifteen years she had been using both a depilatory and the tweezers. Four hours at a time she was in the habit of devoting to the painful operation of removing the hair. Neither her mother nor any one of four sisters manifested any tendency to hirsuties, and the patient herself did not, except on face.

During the first six months of treatment I removed, with the assistance of Dr. Conover, over twenty-seven hundred hairs. During the following year about twenty-three hundred were removed by Dr. Conover and myself, making five thousand hairs in all.

The patient is still under occasional treatment for the growth of hair upon the upper lip, from which would grow a strong moustache. The removal of this is very tedious, since with a view to the prevention of even minute scars, she only allows a dozen or more isolated hairs to grow at one time upon the lip. The left side of her face, exclusive of the upper lip, is, and has been for the past eight months, perfectly free from the objectionable growth. Upon the right side the hairs were removed with less care at first, and some fine ones have been lately removed. There have been many minute cicatrices left by the needle, but they are of little account, and the result of the prolonged treatment has been most satisfactory both to myself and to the patient.

Case XII.—Mrs. ——, a large, handsome lady, aged twenty-five, and apparently in perfect health; married four years and no children. Her skin was unusually fine and delicate, and with the exception of fifty-seven hairs growing upon her neck and a single small mole upon right side of chin, there was no tendency to an abnormal growth of hair upon face or other portion of body.

This patient's skin seemed unusually sensitive, and as an exception to the rule, she complained of the pain produced by the operation. Small wheals, like mosquito-bites, were produced at the points where the needle was inserted.

These fifty-seven hairs were removed in November, 1881. Two months later she wrote me in accordance with my request and stated that the red marks caused by the needle still lingered, "but so surely did the instrument do its work that the objectionable hairs seem to be permanently eradicated, *not one* having reappeared. The mole on the chin has entirely gone."

DEATH AFTER OVARIOTOMY, DUE TO PRELIMINARY TAPPING.

By LAWSON TAIT, F.R.C.S.,

BIRMINGHAM, ENGLAND.

In the last series of one hundred operations which I have performed for the removal of ovarian cystoma, there have been three deaths, and in all of these cases the patients had been previously tapped. The deaths were all of the same kind, and were due to the same cause—heart-clot; and they would, I feel sure, most certainly not have occurred but for the tapping. With such an experience, I think it quite time that a strong opinion was pronounced against the practice of tapping ovarian tumors in all cases where removal of the disease is possible.

I propose to allude particularly to only one of these cases, and to give it without any details, such as might lead to its identification, for I do not desire to convey an impression that I blame the gentleman who performed the tappings. He was but carrying out the principle which until lately governed our practice in such cases: to palliate and stave off the major operation as long as possible. Whilst the mortality of ovariotomy with the clamp was *twenty-five per cent.* this was the correct thing to do, but now that the mortality is only *three or four per cent.*, especially when the whole of that very small death-rate seems to be due entirely to conditions produced by delaying the operation, we must reverse our practice and perform ovariotomy in an early stage of the disease. If my operations were confined to cases which had never been tapped, I think I should have no mortality at all, or, at any rate, less than one per cent.

The case in question was one in which neither the age of the patient nor the character of the tumor were such as to warrant an unfavorable prognosis, but I told my friend who sent me the case that she would probably die of heart-clot in thirty or forty hours after the operation, because she had been tapped a great many times. On the day of the operation she was of immense girth, yet sixty pints of fluid had been taken from her only a few days before.

The fluid was intensely albuminous, that is to say, it was made viscid by a large amount of one or more of those mysterious inconstant coagulable substances found in ovarian and ascitic fluid. I have made prolonged researches on the nature of these substances, and so far I have found no two exactly alike, and therefore I look upon it as hopeless to expect that we shall ever be able to reduce them to order or to a satisfactory nomenclature. It is perfectly certain that the abstraction of these albuminous substances in large quantities deprives the blood of some very important item of its constitution, and it is no less certain that when the blood has been robbed of these substances the rest of its constitu-

ents, or some of them, have a tendency to coagulate in a most unusual way. The patient of whose case I am speaking did not look anæmic, and she was not very much emaciated, but within three years she had had at least seventy gallons of fluid, with about eight per cent. of solid matter in it, removed by tapping.

Unfortunately the result of the operation fulfilled my prediction. In a few hours the swelling of her legs, the difficulty in breathing, the slight delirium, the rapid rising of the pulse and its speedy disappearance from the extremities, showed me that my previous experiences were being repeated. From the point of ligature in the stump a firm, colorless clot began to grow. It gradually occupied the whole venous system, finishing its work in thirty-six hours. Such an ending I have never seen in any case in which there had been no repeated previous tapping.

I conclude from this and from the fact that all the three deaths in my last hundred cases have been of exactly the same kind, that ovarian tumors should never be tapped until it has been ascertained that they cannot be removed.

If a patient is once tapped she insists on its repetition, as long as she gets a few weeks' relief from it, whereas, if she had the tumor removed in an early stage, she would have permanent relief without risk. The first tapping is therefore the step that is to be avoided, for not only is it risky in itself—far more risky, I believe, than the removal of an untapped ovarian tumor—but it complicates the subsequent operation in a very fatal manner.

ILLUSTRATIVE CASES OF DISEASE OF THE EYE ARISING FROM AFFECTIONS OF THE TEETH.

By EDWARD T. ELY, M.D.,

OPHTHALMIC SURGEON TO CHARITY HOSPITAL; ASSISTANT SURGEON TO MANHATTAN EYE AND EAR HOSPITAL, ETC.

It is a familiar fact that serious disease of the eye may be caused through affections of the fifth nerve in its distribution to distant parts. The following four cases (from the practice of Dr. Roosa and myself) are offered in illustration of the subject, because they were very carefully observed, and because in each one the relation of cause and effect seems unmistakable. In all the affection of the eye appeared to arise from irritation about the teeth.

Case I.—*Paresis of Orbicularis Muscle—Irregular Spasm of Ciliary Muscle—Monocular Diplopia.*—Male, aged twenty-six. Complains that vision of right eye has suddenly become blurred, and that he sees double with that eye. No pain or redness. Pupil small and movable. Fundus normal. Has paresis of right orbicularis; lids cannot be completely closed, and eye is very watery. V. = $\frac{2}{3}\frac{0}{0}$, and with + $\frac{1}{5}$ c. 180 = $\frac{2}{3}\frac{0}{0}$. A careful examination of the teeth shows nothing abnormal.

Patient was ordered to take mercury and iodide of potash, which he did for some time without benefit. One night he was seized with severe pain in one of his upper molar teeth. The next day the tooth was extracted, and an abscess which had formed about its root was evacuated. Paresis of orbicularis muscle, diplopia and astigmatism disappeared immediately, and V. became $\frac{2}{2}\frac{0}{0}$ without any glass. There was no doubt about the astigmatism in this case, as the vision was subjected to the most careful tests.

Case II.—*Paresis of Right Internal Rectus and Ciliary Muscles.*—Male, aged thirty-one. December 15, 1880, complains of blurring and "confusion" of vision of right eye of a week's duration. No redness or pain. Size and movements of pupil normal. Fundus normal. V. = $\frac{2}{2}\frac{0}{0}$, with + $\frac{1}{16}$. Slight paresis of right internal rectus muscle. Slight paresis of accommodation, requiring + $\frac{1}{16}$ to restore normal range.

Root of first molar tooth of upper jaw, right side, is denuded, roughened, and sensitive. Patient was referred to a dentist, and was also treated with mercury and iodide of potash (there being a syphilitic history), and by electricity. Part of the root of the tooth was removed and the remainder filled. The nerve of the tooth was found "dead," and the alveolar process absorbed, but there was extensive suppuration in the adjacent parts. The ocular paresis recovered immediately when the condition of the tooth was corrected (in the latter part of January), the other treatment having been abandoned for some time previously.

Case III.—*Partial Paresis of Third Nerve.*—Female, aged forty. June 3, 1881, complains of confused feeling in right eye, which she cannot describe. Says it began with burning pain in the right ear and the right side of the head.

No redness of eye. Pupil dilated and immovable, and accommodation partially paralyzed. Opacities of both lenses. Teeth on right side are decayed and tender, and gums are in an unhealthful condition. Advised to consult a dentist.

June 9th.—Paresis of third nerve disappeared entirely after extraction of one tooth.

Case IV.—*Inflammation of Conjunctiva and Sclera (?).*—Male, aged thirty-three. January 20, 1882, complains of painful inflammation of left eye, which he has had for three weeks. Has had "neuralgia" of left side of face, most of the time, for the past month.

There is a patch of inflammation involving conjunctiva, subconjunctival tissue, and apparently the sclerotic, at the lower and outer quadrant of the globe. It is about ten millimetres broad, and extends from the edge of the cornea to the retrotarsal fold. Its appearances are those of the affection ordinarily called episcleritis. There is lachrymation and localized ciliary tenderness. The pupil is small, but movable. Vision and accommodation normal. Fundus normal. Between first and second canine teeth of upper jaw, left side, is a small ulcerated patch on the gum. Space between the teeth is very tender upon pressure with probe.

Patient was advised to consult a dentist, who found an exposed nerve in one of the canine teeth just referred to. An application was made to devitalize the nerve, and the facial neuralgia disappeared at once. The ocular inflammation disappeared completely within forty-eight hours. No local treatment for the eye was employed.

20 East Thirtieth Street, February, 1882.

Treatment of Pneumonia by the Inhalation of Ether.—Dr. Samuel W. Francis, Newport, R. I., reports the successful treatment of an acute case of pneumonia by the inhalation of sulphuric ether. He says that "if seen early, during the first stage, by inhaling ether for thirty minutes, every six hours, many severe and protracted cases of sickness would be arrested." Dr. Francis recommended inhalation of sulphuric ether for bronchitis in 1868 (see J. Solis Cohen's work).

SOME REMARKS ON ANTISEPTIC MEDICATION.

By J. F. CORRIGAN, M.D.,

SOUTH ORANGE, N. J.

MANY of my professional brethren in New York have lately given attention to the system of antiseptic medication introduced by Dr. Déclat, of Paris. The successful results of this system in Europe, and more especially in France and the French colonies, where it is better known, have already been sufficiently extended and marked to justly claim the examination of our American *confrères*.

In this city the treatment has been successful in several cases that had resisted all other medication, reports of which, I trust, will be laid before the readers of the MEDICAL RECORD at a later period. I beg leave now to present to them, for a thorough investigation in practice, a short, though imperfect sketch of this antiseptic treatment, in the hope and belief that by its means we shall be able to control or cure some diseases that now apparently defy medical skill.

Modern scientific investigations have tended, with increasing force, to prove that diseases are caused by the introduction into the system of minute germs, which, finding themselves in a fluid—the blood—suitable to their development, rapidly increase in strength and numbers.

As far back as 1846, Dumas, in his admirable "Lessons to the Faculty," had expressed the thought that malarial fevers could be caused only by the penetration into the human economy of some plant or part of plant developed in the infected locality.

Other observers followed with similar deductions, and afterward came the great Pasteur, whose experiments and demonstrations before the Academies of Medicine and of Sciences, in Paris, developed and established the certainty of the propagation of disease by living germs. This was shown in malignant pustule, in which he succeeded in isolating the germs, developing them, and producing the disease at will in animals by inoculating them with these germs.

It remained, then, to find a germicide, which could be introduced into the system, which would not be essentially changed by the living tissues, nor be injurious to them, retaining, at the same time, its power of killing these germs wherever met.

It is known, from the experiments of Dr. Calvert, that a solution of the salts of mercury prevents all animal fermentation, that a solution of the salts of quinine prevents all vegetable fermentation, and finally, that a solution of carbolic or phenic acid prevents both. The salts of quinine, however, though readily soluble in the acids of the stomach, begin to lose their virtues the moment they are introduced into the alkaline blood, and consequently do not meet the requirements of an efficient germicide.

The development of germs in the living system is as properly called a fermentation as the similar process occurring in the wine-vat in the formation of wine. In the latter case, as soon as the fermentation begins, the temperature rises. Shortly thereafter myriads of minute living beings, the sole cause of fermentation, attack the saccharine matter, decompose it, and appropriate to themselves a portion, sending another into the atmosphere under the form of carbonic acid, and finally leaving there a new substance—alcohol—which, mingling with the remainder of the fermented matter, constitutes wine.

If the vat is subjected to a temperature of about sixty-five to eighty-five degrees F., the fermentation is very active. If, on the contrary, it is exposed to a current of cool air, or if it is refrigerated by being placed in cold water, the intensity of the fermentation is proportionately diminished. If, however, at the outset, carbolic acid is added to the grape-juice, fermentation will not take place. This results solely from the fact that the acid kills the germs that would otherwise cause the fermentative transformations.

Studying the same process in the human organism, in zymotic diseases, we find that the fermentitial microbes, after their introduction into the circulation, will then seek the elements of their nurture, and, in order to appropriate them, will subject the blood to a transformation similar to that caused in the juice of the grape. The easier the action of fermentation, the greater is the heat and the more intense the malady.

The analogy in this, however, is not complete, insomuch as that in the wine-vat the microbes only find inert matter, whereas in the organism they have to contend against the vitality of the globules, which are, in themselves, a sort of living beings. The greater their vitality and resisting power, the lesser are the fermentation and sickness.

There is, therefore, a vast distinction to be made as regards germs in ordinary fermentation of inorganic matter, and those in fermentation in living organisms. It is evident that doses of antiseptics harmless to the former may have very great effect against the latter.

Notwithstanding this reservation, the analogy between the two orders of fermentation is striking. It is evident that, in zymotic diseases, the sooner the ferment-destroying substances are administered in full doses, the sooner will be arrested the propagation of the germs, and the better protection afforded to the integrity of the globules. It must not be forgotten that these germs develop in proportion to the lower degree of vitality of the blood.

Phenic acid is the basis and most important constituent of all the remedies introduced by Dr. Déclat. The term phenic is here used instead of the more usual one of carbolic acid, because it is the term employed by Dr. Déclat in his numerous works, and to distinguish it from the carbolic treatment of Lister, which originated several years later, and is different from the former in many important elements.

Previous to the year 1861, carbolic or phenic acid had not been made available as a medicine, properly speaking, that is to say as a remedy against disease, particularly of the internal organs. This was due mainly to its impurity, even of the best specimens ordinarily sold, to the association with it of numerous dangerous bodies, volatile essences, crystallizable and non-crystallizable substances, creasote, cresilic acid, rosaniline, etc., which prevented its administration in doses sufficiently large to be effective and at the same time free from danger. It is not necessary to recall the accidents that have arisen from the use of this character. It can, however, be obtained in a chemically pure state by processes given by Dr. Déclat in his work, "Traité de l'Acide Phénique appliquée à la Médecine," first published in Paris in 1865. After describing the process of extracting the acid from bituminous coal, he adds: "The phenic acid is then rectified by distillation after treating it with five per cent. of caustic potash. At first a mixture of water and acid passes over, then the acid alone in a state of comparative purity. A

second, and, if necessary, a third distillation purifies it completely. It then sublimes in handsome, rhomboidal, silky needles."

The pure acid crystallizes always in long, needle-shaped crystals, never in masses. It has no action on litmus paper. It is soluble in distilled water in the proportion of six per cent. A specimen which does not respond to these tests is not chemically pure. In its pure state it changes readily on exposure to moisture, air, and light. This change can be prevented by combining it, atom for atom, with syrup or glycerine.

When taken internally in either of these combinations, it resumes its nascent condition so soon as the processes of digestion and absorption free it from its combination. Being then readily diffusible, it permeates the system, performing its germicidal work on the way, and passes off principally by the lungs and skin, but a slight amount being eliminated by the kidneys.

In addition to its principal effect as a germicide, there are two minor effects that claim attention. One is that it has a tendency to cause constipation. The second is that, to a very slight degree, it diminishes the fluidity of the blood. In many cases, especially those of chronic diseases, these effects may not be objectionable.

In all acute diseases, however, from simple bronchitis to yellow fever, there is a rise of temperature depending on a fermentative action more or less extended, and corresponding alteration in the blood. This change shows itself most markedly by a diminished fluidity of the blood, tending toward congestion of various organs, especially of the brain and lungs.

To counteract this result of febrile action and the similar tendency of phenic acid, it is necessary to add to the latter some agent which facilitates the circulation by keeping the blood fluid, and at the same time stimulates the nervous system. Ammonia in its chemically pure and gaseous state meets these requirements, and should therefore be associated with the phenic acid, making an ammoniacal phenic acid. It can be made by passing a current of ammoniacal gas, very dry, upon rectified, pure, and very white phenic acid contained in any vessel. The operation is continued until saturation. The matter is made sufficiently hot in order to liquefy the mass, and the liquefaction may be accelerated, if that is necessary, by heating the vessel during the passage of the current of gas.

In chronic diseases, the germs may remain a long time in a latent state, awaiting conditions favorable to their development. This is the case both with hereditary diseases, as tuberculosis, and with acquired maladies, as rheumatism, diseases of the skin, lupus, etc. It has been found by experience that the addition of sulphur to phenic acid is useful in many of these diseases. This combination can be made as follows: After the first preparation above alluded to is made, that is to say, after the phenic acid is completely saturated with ammoniacal gas, let a current of sulphydric acid penetrate into this preparation, the said acid being equally dry, and with the exclusion of the air. This produces an ammoniacal sulpho-phenic acid.

The proper dose of absolutely pure phenic acid for internal use, in an adult, is twenty-five to fifty centigrammes, about four to eight grains daily, to be increased as needed to one or two grammes, about fifteen to thirty grains a day. This gives doses of from two to ten tablespoonfuls a day, of the syrup or glycerine combination as generally used. They may be taken pure or mixed with water, and preferably half an hour before or some hours after a meal. The doses for children are proportionately smaller, as in general medication.

In zymotic diseases, in those terrible emergencies which arise sometimes from poisoning by animals, from dissection wounds, in congestive chills and in similar dangers, the most direct and logical course of arresting the fermentative process is by the immediate introduction into the circulation of an efficient antiseptic liquid. In 1861, Dr. Déclat had begun his system of the internal administration of phenic acid in the Infirmary of the Brothers of St. Jean de Dieu, of Paris. In 1863 he solved the problem as to its hypodermic employment. It was there that the eminent surgeon Maissonneuve saw its application and results, and adopted it in his clinical school of La Pitié, and in the Hospital of the Hôtel-Dieu.

At that period the majority of physicians were firm in the conviction that the subcutaneous cellular tissue could not admit more than thirty drops of any solution whatever at one time and place. Consequently, as phenic acid, though really an alcohol, is somewhat caustic, it seemed that in that quality there dwelt a material impossibility.

To overcome this it became necessary to determine two questions: first, in what strength the solutions would no longer be painful or injurious, and second, what quantity of liquid the same tissue would admit without inconvenience.

After numerous experiments upon animals and also on his own person, he ascertained that the subcutaneous cellular tissue would easily admit, in favorable parts of the body, as many as a hundred drops of a solution containing two per cent. (two grains) of pure phenic acid.

Two to three injections a day, sometimes only one, will often be followed by more marked results than when fifteen grains have been given by the mouth.

There is sometimes, though rarely, as an immediate effect of the hypodermic injection of phenic acid, a temporary intoxication, passing off in a few moments. No dangerous results are known to have ever occurred where the remedies used were pure, the syringe clean, and the injection properly made.

The parts most suitable for hypodermic medication are the inner sides of the arms and thighs, and the front of the chest and abdomen. The latter, however, is the place of election. The needle should be exceedingly fine, and have a flat, bevelled end, so that the irritation from the puncture should be as slight as possible. It should penetrate far enough to reach the cellular tissue. Sometimes a small, hard mass may remain, occasionally tender, especially in stout patients, but the minor effects disappear in a few days.

To sum up the indications for the employment of phenic acid and its combinations: in slight sickness, in malaria, and in many chronic diseases the preparation of pure phenic acid should be used.

Whenever fever is present, as in zymotic diseases, the combination with ammonia is indicated, either alone or alternately with the simple acid.

The use of the combination with sulphur has already been referred to.

Hypodermic injections of the various preparations should be resorted to where a more rapid and thorough effect is needed, whether in adults or children. In many cases both methods should be used.

For external use the acid may be mixed with gly-

cerine and water, the acid being in the proportion of ten per cent., and applied locally in diseases of the throat, etc. This preparation may be added to enemas, using fifteen to forty-five grains for this purpose, may be mixed with equal parts of oil and well shaken with it, forming a very pleasant and useful application in burns, etc., or may be further diluted with water in the proportion of one part to twenty or fifty of water, and thus employed for gargles, for washing inflamed surfaces, for vaginal injections, etc.

For inhalations, the dry emanations or water solutions in form of spray should be used, the latter not stronger than one-half to one per cent. of acid. There seem to be no counter-indications to the use of phenic acid, nor does it interfere with any coincident medication.

The very numerous cases given in foreign publications of the good effects of these remedies, attested by many physicians, encourage the hope that by their use a great advance may be made in the practice of medicine. It is most respectfully suggested that the medical profession examine into the truth of the system, and report results, whether good or bad, that can be clearly traced to the action of chemically pure phenic acid.

Reports of Hospitals.

BELLEVUE HOSPITAL, NEW YORK.

CEREBRAL EMBOLISM ON THE RIGHT SIDE.

Four cases related by Dr. Janeway, at his clinics this winter, illustrate how little reliance can practically be placed in some of the general rules laid down as aiding in diagnosis. The statement is made, and based on careful analysis, that cerebral embolism occurs more often on the left side than on the right. But Dr. Janeway presented three brains in which the emboli were in the right Sylvian artery, and with the histories of these cases gave the history of another, in which the diagnosis of the same lesion was unquestionable.

During the period in which these cases came to him he had but one case of left cerebral embolism.

EARLY SYMPTOM OF ANEURISM OF THE AORTA.

Dr. Janeway refers to three cases, in his experience, of aneurism of the arch of the aorta, in which the first symptom attracting attention was cervicobrachial neuralgia.

One of the visiting physicians insists upon the importance of the rule that two doses of opium should never be given with a shorter interval than one hour and a half or two hours, and says that he has seen, in several cases in which this rule has been disregarded by others, disastrous results from the sudden and apparently cumulative action of the drug.

OOZING FROM LEECH-BITES.

The application of a small piece of blotting-paper to leech-bites is, in some divisions of the hospital, a favorite method of stopping the bleeding, and one which often gives surprisingly satisfactory results.

THE TREATMENT OF PNEUMONIA AT BELLEVUE.

The motive of the general treatment of pneumonia at Bellevue Hospital is to sustain the powers and stimulate the functions of the patient till the comparatively brief and self-limited disease shall have spent itself.

The pulse is taken, rather than the temperature, as the guage which best indicates the capacity for resistance, and an increase in its rapidity and diminution in its force are understood as a call for stimulants. The forms of stimulation used are to some extent subject to differences of opinion on the part of the visiting physicians, but all are agreed as to the value of whiskey, and there is almost as much unanimity in their regard for the carbonate of ammonium. Digitalis is much used; bnt it is objected to by some, partly because experience seems to indicate that in some cases, when the crisis of the disease has passed, patients are left, after its use, in a condition less favorable for recovery, and partly from the theoretical consideration that this drug is not general enough in its action. Camphor has been employed by some as a diffusible stimulant.

The general treatment of pneumonia is then by simply stimulation. In special conditions, however, more is done. When the patient is first seen, if he is suffering from considerable pain, a few doses of morphia are recommended.

If the disease is seen at its outset, and if the outset is violent in character, one at least of the leading physicians on the visiting staff believes in the good effect of a few doses of aconite, but its use is not general in the hospital The spirit of Mindererus, sweet spirit of nitre, calomel, and Dover's powder, are used by some in the first stage of the disease. Quinine is occasionally called upon to bring down the temperature when it rises to a serious height. One of the visiting physicians makes a special point of the importance of watching the kidneys and seeing that they perform their duty well.

The appearance of œdema of the lungs finds all agreed upon the necessity of crowding the stimulants. But beyond this there are some differences of practice. They would be included in the use of dry cups, the hot pack, oxygen, and, in the few cases which are entirely suitable for it, bleeding.

INCONTINENCE OF URINE IN CHILDREN.

The combination of ergot, belladonna, and iodide of iron, proves more useful for incontinence of urine in children than either of the drugs alone, or than any other combination which has been tried.

The Origin of Vaccinia is yet a disputed question. The old opinion, that it was a modified smallpox, has of late been given up by many, especially in view of Chauveau's experiments. Dr C. R. Drysdale has recently written a note to the *British Medical Journal* on the matter. He concludes by saying:

"For my own part, I have paid a good deal of attention to the evidence on this most curious and important matter: and, from formerly having been of Mr. Fleming's opinion, I have become convinced by personal conversations with Mr. Ceely, Mr. Badcock, and Mr. Green, of Birmingham, that vaccinia is merely 'mitigated small-pox.' Mr. Badcock told me, a few months ago (November, 1881), that he had succeeded in raising a vesicle on cows thirty times out of four hundred experiments; while, it must be remembered, Chauveau never raised a vesicle in any of his. I am, therefore, still of the old faith in this matter; but think the time has come for making careful fresh experiments, in which, I trust, Professor Fleming will assist us in arriving at some definite conclusions. Theory (Pasteur's) is on the side of Badcock, since it is only on this theory that we can account for vaccinia for preventing small-pox."

Progress of Medical Science.

Experimental Uræmia.—A recent work, published by MM. Feltz and Ritter (Paris, 1881), summarizes the results of researches which the authors have carried on for the last fifteen years, and is analyzed by M. Lerebouillet in the *Gazette Hebdomadaire*, October 21, 1881. Says M. Lerebouillet: "The antecedents of the patient, progress of the symptoms, and their well-marked character, allow a practitioner to quickly establish the diagnosis of uræmia, of which he only partially understands the meaning, and much less the method of treatment." He knows, it is true, that bleeding in large or repeated quantities has some chance of arresting the most terrible complications; he has often seen it stated that drastics and diaphoretics sometimes succeed. But is it very rational to bleed an albuminuric individual who has already long since arrived at a state of extreme debility; is it of use to purge him? These uræmic symptoms are not due to acidity of the urine, nor to the introduction into the veins of urinary organic matters. On the contrary, it is claimed that the poisonous salts of the urine are the salts of potash. If clinical observation should confirm these experiments made on animals, and if it be demonstrated that uræmia is nothing more than poisoning by salts of potash accumulated in the blood or fixed in excess in the tissues, a new era will certainly have been reached, and the physician will have comparatively little difficulty in initiating therapeutic measures to antagonize the potash salt. — *British Medical Journal*, November 12, 1881.

High Local Temperatures.—Mr. William Squire, in reviewing the very interesting subject of high temperatures in non-fatal cases, asks that those who have lately furnished printed records of extraordinary readings, should re-examine their patients in the light of our present information, and furnish such explanation as each case affords. He therefore calls attention to the following points: During scarlet fever a temperature *in recto* has been 105°, while it was only 95° on the skin of the abdomen. In the axilla an accurate surface thermometer has marked 103° on the thoracic side and 98° on the brachial, in a case of acute pulmonary congestion. In another, where a man had some obscure affection of the cervical sympathetic, the temperature was found 4° higher on the left temple than on the right. The range in health, at various times in the day, will vary between 92° and 96°, but the range between the two sides at the same time is rarely so much as half a degree. In conclusion, Mr. Squire suggests that a definite value will be given to future records of high temperature, provided allusion is made to the indications of increased combustion, as evidenced by the high color or specific gravity of the urine. Further, records of the associated pulse and temperature, respiration, condition of mouth and tongue, and combined observations on the temperature at various parts of the body, statements as to the presence or absence of hysteria, or any desire to induce deception, as by the use of hot-water bottles, etc., are required to give such cases a scientific standing. A full history of the case previous to and after the high temperature would also assist in making generalizations adapted to explain the apparent paradoxes.—*Lancet*, December 10, 1881.

Œstrus Larvæ in the Nostrils.—The following unique case is reported by Kirschman: A peasant woman, aged fifty years, was seized with a violent fit of sneezing, lasting a half-hour. This was followed by epistaxis, which continued almost without interruption for three days, finally requiring her admission into the hospital. Here the hemorrhage was found to proceed from the left nostril only. The left half of the face was enormously swollen. Attempts to introduce a Bellocq's sound were rendered futile by an obstacle in the nostril, as well as by the intense pain to which they gave rise; injections of diluted liquor ferri sesquichlorati were consequently ordered. After the first injection the patient stated that she felt something moving around in the nose and in a few moments a worm fell out, followed shortly after by a second and a third. After a short interval a clump of twenty or more worms was evacuated, together with an ichorous and fetid mass, which proved on examination to be the greater part of the cartilaginous septum. The hemorrhage now ceased and the swelling began to diminish. On the following days more worms were expelled, amounting in all to seventy-nine living specimens. In a short while the patient recovered completely. Each of the worms was two centimetres long, and one-fourth centimetre wide, and was recognized as belonging to the class of Œstrus ovis, the gadfly of the sheep. This fly deposits its eggs in the nostrils of the sheep, whence the growing larvæ crawl into the frontal sinus, there causing ulceration and frequently gangrene of the mucous membrane, the affected animals in the latter event perishing. The symptoms are constant sneezing and a discharge of mucus from the nostrils, together with a tossing of the head from side to side, thereby offering considerable resemblance to the staggers, which is, however, a much more serious disease.— *Wiener med. Wochenschrift*, December 3, 1881.

Simon on Large Doses of Belladonna in Whooping-Cough.—In the *Hôpital des Enfants Malades*, of Paris, M. Simon makes frequent use of belladonna in various forms; less often of the neutral sulphate of atropia. He cites a case of whooping-cough in a child of three and one-half years, where he gave during the first day the unusually large dose of thirty drops of the tincture of belladonna; on the next day, forty drops; and on the following, sixty drops, continuing this latter amount for ten days, during which time the medicine was borne very well and the attack greatly moderated. The same good fortune attended him in prescribing a similar amount for a second child, four years old. In a third instance, a child three and one-half years old received between forty and fifty drops per day. In a young girl of thirteen the dosage was at first ten, and finally twenty drops, the amount being less well borne by the older children. Under the age of two he very rarely uses belladonna, but if he were called upon to prescribe it for an infant one year old, the dose would be from one to five drops. Belladonna is much preferred to atropia.—*Gazette des Hôpitaux*, January 5, 1882.

Ord on the Diagnosis of Myxœdema.—At an adjourned meeting of the London Clinical Society, held January 13, 1882, Dr. Ord enumerated the chief data by which he would distinguish myxœdema from other affections, and especially nephritis, with which some observers have sought to connect it. Clinically, he found it more common in women than in men. Albuminuria did not occur in the early

stages, and sometimes was absent in the later. The textures of the skin were thickened; the hair was scanty and ill-nourished; perspiration was absent. The thyroid gland was increased in size. Bodily temperature low. Speech, thought, and movements were sluggish, but still were performed with a good degree of completeness. There was no loss or exaggeration of the patella reflex. The patient, as the disease advanced, became unreasoning, suspicious, and perhaps finally demented. Death was sometimes introduced by debility and uræmia. The pathological conditions thus far noted had been, in the first place, swelling of the connective tissues throughout the body, these substances being unusually rich in nuclei and mucin. The elastic tissues shared in the overgrowth. Concurrently there was atrophy of the heart, liver, kidneys, central nervous organs, hair-bulbs, sebaceous and sudoriferous glands.—*Medical Press and Circular*, January 18, 1882.

How the Fibrinous Clot of an Aneurism is Formed.—The old and long-accepted view that laminated aneurismal clots are formed by a retarded blood-current depositing its fibrin in successive layers, and the later theory of Broca, by which clots were classified as vital, active, or fibrinous, in contradistinction from those that were passive or mechanical, have been re-examined by Dr. H. D. Schmidt, of New Orleans, with special reference to a case of fusiform aneurism of the femoral. He had been much struck on previous occasions with the irregularity in the disposition of the fibrinous layers, differing as they did much from types that have been described. In this present instance he found abundant evidence to prove that the original fibrinous deposit, which measured only two and one-fourth inches in diameter, had been separated from the wall of the vessel, allowing the blood to pass behind it. The laminæ also were not concentric but imbricated as a rule, and it was plain that the blood-current wave had swept in different directions at different times. The appearances called to mind the arrangement in the corollary petals of a flower like the rose, rather than the coatings of an onion, which has been the object so often selected for comparison. The cause of these peculiar deposits he traces to various conditions, and even to the position of the patient.

When fibrin is deposited between the clot and the sac, ridges and columns are formed, which at first are rectangular to the sac, but subsequently are pressed down by the onward current of the blood, which in passing deposits another series. The blood-corpuscles are thought to be active agents in the organization of the thrombus. Each change in the form of the tumor necessitates a change in the manner in which the fibrin is deposited.—*Annals of Anatomy and Surgery*, February, 1882.

Thompson on Lithotrity at a Single Sitting.—Sir Henry Thompson, in summarizing some of his views, expressed in a lecture delivered at University College Hospital, makes the following statements: Lithotrity completed at a single sitting, is, in experienced hands, an operation unequalled in its safety for the patient. It appears also to produce less subsequent persistent irritation of the bladder than the operation by several sittings. No new form of instrument is required by this operation. The value of the proceeding lies altogether in the removal of all foreign matter from the bladder at once, so that nothing remains to excite inflammation in an organ already irritated by the process, and the less irritating the operation has been the more certain and more speedy will be the recovery. It should be employed by beginners only for calculi of moderate size, when hard. If calculi are large as well as hard, a young surgeon will succeed more safely by lithotomy. In friable phosphatic calculi, size offers a much less serious difficulty. Lithotrity at a single sitting for a hard calculus, upward of one ounce in weight, and *a fortiori* when double that weight, certainly demands an experienced operator.—*The Lancet*, January 14, 1882.

Poisoning by Duboisia.—Dr. Berner has observed in his own person symptoms of poisoning due to instilling a one per cent. solution of duboisia into his own eye. About two minutes after the operation all objects appeared misty, small, and distant. At the same time he felt vertigo in turning round. In the opposite eye, which had not been treated, the pupil was dilated to the maximum; there was absolute loss of accommodation, and sparks of fire appeared before him. Headache was absent, but he experienced a sensation of coolness in the face and temples, and a constant desire to be moving. The intellectual functions were also disturbed, and he became somnolent. At first there was buzzing in the ears, then failure in hearing. The voices of those about him seemed like distant whispers. The mucous membrane of the mouth and throat were dry; deglutition became painful and difficult. The embarrassments of speech he regarded as partly due to the cerebral condition, and partly to paralysis of the tongue. The arch of the palate also was paralyzed. Pulse was 88, full and strong; respiration superficial and accelerated. Partial and slight paresis of the muscles of chest and extremities was thought to be present. At first the fingers and nails were pale and cold, later they were red and hot. The walk was unsteady, as of a drunken man. These symptoms disappeared in about four hours, without any special treatment.—*Annales d'Hygiène Publique; l'Abeille Médicale*, January 9, 1882.

Results of Foreign Bodies Remaining in the Eye.—Prof. Leber, of Göttingen, claims that inflammation and suppuration following the accidental lodgment of foreign bodies in the eyes are not due to the foreign body *per se*, but either to septic matter carried in with the foreign body and undergoing decomposition, etc., or some chemical change in the body itself. In corroboration of these ideas he cites instances from antiseptic animal experimentation, where bits of clean glass, gold, etc., have remained in the different chambers of the eye for a longer or shorter period, and yet caused no inflammation, whereas similar but non-antiseptic experiments have resulted in suppuration, atrophy of the retina, cloudiness of the cornea, hemorrhages into the anterior chamber, and, finally, total loss of eyesight. He concludes that similar results follow like experiments upon the human eye, and instances one case where a clean piece of iron penetrated to the ciliary region through the cornea and lens, the result being a corneal cicatrix and traumatic cataract. But no inflammation ensued until months had elapsed, and chemical changes in the iron initiated the morbid processes, resulting in destruction of the organ. Subsequently, when enucleation was performed, the iron was found in a corroded condition, the cornea clouded, the lens absorbed, the vitreous fluid all gone, while the retina was detached and atrophied. —*British Medical Journal*, December 24, 1881.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, March 11, 1882.

EXPERIMENTAL STUDIES REGARDING THE NATURE OF DIPHTHERIA.

Drs. Wood and Formad have continued their researches into the pathology of diphtheria, and have presented the results of their work in a recent supplement to the *National Board of Health Bulletin*.

We present a brief review of their report, which contains matter of the highest interest.

In a bibliographical introduction the authors quote nine observers who support, more or less strongly, the bacterial origin of diphtheria. The same number of persons is cited as opposing this view.

In their experiments the authors worked with two kinds of material. One was the membranes from cases of mild sporadic diphtheria occurring in Philadelphia; the other was from cases of epidemic and malignant diphtheria that had occurred in Luddington, Michigan.

The pathology of diphtheria is discussed, and the authors take the ground, new so generally held, that croup and diphtheria are identical, pathologically.

A description is given of the appearance and natural history of the micrococci found in diphtheria. These in fresh membrane are of one kind only. If rod-bacteria are seen, it is an evidence of putrefaction. The organisms are at first minute, round bodies, averaging in size $\frac{1}{25000}$ of an inch, and infesting the white blood-cells and epithelium, which they tend to destroy. In the course of twenty-four hours they grow a little larger, elongating till they look like small rod-bacteria, forming occasionally chains or dumb-bell shapes, but in large part existing as colonies or zoöglœa masses. They have apparently only a trembling or vibratile movement.

These micrococci are always found in diphtheritic membrane, and, as our authors believe, are always to be seen in the blood of cases of malignant diphtheria.

They are morphologically identical with the micrococci found in the scrapings from a furred tongue, as well as in other non-infective organic matter. They are not found in the blood of healthy persons. But the micrococci of malignant diphtheria have this important distinguishing peculiarity: they can be cultivated to the tenth generation, gradually losing meanwhile their poisonous properties. Ordinary micrococci can only be cultivated for four or five generations, becoming gradually more sluggish and inactive. The difference between the poisonous and non-poisonous micrococcus is, therefore, one not of form, but of vital activity, or, so to speak, of fighting capacity. This is, perhaps, the most important conclusion reached by our investigators, for we can at once infer that the poisonous may be easily developed out of non-poisonous organisms.

Many inoculation experiments were made upon rabbits. These animals generally died. When membrane from mild cases of diphtheria was inoculated, there was, as a rule, local inflammation, cheesy deposit, and general tuberculosis. When the more virulent material was used, there was local ulceration, false membrane, septic fever, and death, with micrococci in the blood and membranes, and sometimes in the organs.

The authors think that in these latter cases diphtheria was really inoculated in the rabbits. They review the objections made to such a conclusion by Curtis and Satterthwaite. These latter experimenters produced death in rabbits by inoculating foul tongue-scrapings and putrid Cohn's fluid. The lesions and symptoms were similar to those produced by inoculating diphtheritic membrane. Hence, they say, the death was from no specific diphtheritic poison.

To this Wood and Formad say that the deaths in rabbits inoculated with tongue-scrapings and Cohn's fluid resulted from a tuberculous infection, and resembled the deaths produced by them with non-malignant membrane. Or else the "scrapings" had themselves acquired a septic malignancy which was really diphtheritic. This latter is, of course, simply admitting that diphtheria is itself not the specific disease supposed, but only a gangrenous septicæmia.

Still, as the evidence now stands, it may be assumed, provisionally, that diphtheria was really produced in the rabbits.

This assumption, it will be seen, involves a good deal. For, if these rabbits really suffered from diphtheria, there is a solid basis for studying the question as to what share the micrococci had in producing it.

This part of the inquiry can be followed up in three ways: *First*, by studying the influence of filtration upon the diphtheritic poison; *second*, by studying the action of the isolated micrococci as they are to be obtained from urine; *third*, by studying the action of micrococci raised in culture-chambers entirely away from the original poison.

Regarding the first point, the authors are content with citing the conclusive experiments of Curtis and Satterthwaite. These gentlemen showed that the infectious principle of diphtheria, putrid Cohn's fluid, and the like, is solid and particulate.

As to the second question, Letzerich has found that if the clear urine of a patient suffering from diphtheria be run through filter papers, and these be then washed and dried, the paper is full of micrococci alone, and is as poisonous as diphtheritic membrane. Drs. Wood and Formad repeated Letzerich's experiments, except that they did not wash the filters. They found that the dried paper was even more poisonous than diphtheritic membrane itself.

This confirmation of Letzerich is certainly most important, and our experimenters are justified in laying great stress upon it. In their opinion it proves that the micrococci are either themselves the poison, or carry it, or by their growth develop it.

The last point, as to whether the cultivated organisms could produce diphtheria in rabbits we have already referred to. The experiments were hardly conclusive, being not sufficiently numerous, but they tended to show that inoculations of the second culture of malignant organisms would produce the disease, that with higher cultures the poison disappeared, and that cultures of micrococci from mild cases were harmless.

It seemed also apparent, from other experiments, that the diphtheritic micrococcus gradually lost its vitality upon exposure to air.

In conclusion, it will be seen that the above experiments show, if anything, a very close connection between diphtheria and certain septic diseases, such as hospital gangrene and anthrax. In the latter diseases the same micrococci are found in the blood as in diphtheria. The *bacillus anthracis* has some features of resemblance to the micrococcus of diphtheria, both in appearance and life history.

That diphtheria and various septic diseases are only different manifestations of the same affection seems, therefore, not improbable.

But until this identity is established and it is proved that rabbits can be inoculated with true diphtheria, we cannot say that micrococci are the actual germs of the disease.

DEAFNESS IN SCHOOL-CHILDREN.

At the request of the Commissioner of Education, Dr. Samuel Sexton has made some investigations regarding the prevalence of deafness among school-children, its causes and prevention. The results of his work are published in the form of a circular by the bureau in question.

Dr. Sexton examined five hundred and seventy pupils in the public and parochial schools of this city. In seventy-six persons, or about thirteen per cent., there was greatly diminished hearing in one or both ears. In only one case had any deafness been suspected previously either by teacher or pupil. The test used was generally the teacher's voice, the pupil being placed about twelve feet away.

The inference from the above facts is that there is a wide prevalence of impaired hearing among school-children, that this fact is not recognized by the teachers, and that, consequently, the children suffer in various ways. No one at all acquainted with aural diseases will be surprised at or doubt this conclusion. One of the immediate remedies for the trouble is to seat the children who are deaf nearer the teacher, and also to institute a careful examination of the pupils as to deafness at the beginning of each term.

The existence of deafness or defective hearing of any kind among teachers also is a matter deserving attention, and is referred to by Dr. Sexton. Much injury and injustice may be done by a teacher whose sense of hearing is not normally acute. An examination of teachers as to this point is wisely recommended.

A number of hints are given regarding aural hygiene, especially as it concerns the young and their relations to the school-room. The dangers from taking cold, from dental irritation, from out-door bathing, mouth-breathing, boxing the ears, and from the constant din of street noises, are discussed.

The essential point in Dr. Sexton's pamphlet—viz., that there are many unrecognized cases of deafness in the schools, and that these ought to be looked out for—is one of real importance, and the Commissioner of Education has done a wise thing in bringing it to the attention of our educators. We draw therefrom another argument for the presence of the doctor in the school-room.

THE CHARITY ORGANIZATION SOCIETY.

With the best of intentions on the part of the most trustworthy charitable organizations, there is no absolute guarantee against fraud. Recent investigations have proven that apparently deserving and respectable persons have been beneficiaries of several societies at once, adapting their religious creed to the emergencies of the moment. The same system prevails in our dispensaries and hospitals, as every one connected with these institutions very well knows.

The main cause of this evil appears to be a lack of proper system in general charity organizations which shall enable each society to protect itself against frauds and so-called "repeaters," and at the same time directly and efficiently aid the common cause. A movement in this direction, we are glad to learn, is now being made by the Charity Organization Society of the City of New York, a newly established association, having for its main object the systematic intercommunication between the various churches and charitable agencies in the city, thus checking

the evils of the overlapping of relief to professional paupers, and giving proper directions to such as are entitled to help from particular charities. Also to aid, in a strictly advisory capacity, every effort to repress mendicity by the prosecution of impostors, and in every other way protect and advance the interests of the deserving poor. The society will not dispense alms in any form, but will be what has so long been needed, a central bureau of information concerning all matters connected with charity organizations of every kind. The step has not been taken unadvisedly, nor does it appear that anything is lacking in the system of management of the society to make it in every respect what it should be. Too much credit cannot be given to Miss Jane S. Lowell for her zeal and perseverance in laying the broad foundation for its efficient working. Her large experience in charity organization as one of the commissioners of the State Board of Charities, has thus been utilized in a direct and practical manner, and we have reason to expect the best results. The management of the society is vested in a council composed of representative men, the Mayor and heads of departments being members ex-officio, while Dr. S. Oakley Vander Poel has the honor of being its first president.

We echo the sentiment of the medical profession when we wish the society success. The realization of the result will tend to remedy many of the flagrant abuses of medical charity, of which physicians know so much and from which they have so long suffered.

ADVANCING THE STANDARD.

There is no doubting the fact that the standard of qualifications for graduation in the medical schools of this city has materially advanced within the past few years.

The system of examination is more rigid than at any time heretofore, and great pains are taken to prevent the graduation of unqualified persons. Written examinations are the rule, the questions given are selected with remarkable care, and a given standard is strictly enforced by a direct vote of the faculty on the papers of each candidate. It is practically conceded that the time has come, with the New York schools at least, when a high standard of qualifications for graduates must be guaranteed, otherwise the prestige of New York as a medical centre will not be maintained. The active competition for places in our hospitals is such, and the requirements for admission to interneship are so rigidly enforced, that no New York school can afford to be distanced by its generous rival. The same holds true with reference to army and navy positions. The three medical schools of this city are about on a par regarding standards for graduation, and we venture to say that the candidates who pass through their respective examinations will be immeasurably better fitted for the practice of their future calling than those who graduated with honors a quarter of a century ago.

Certainly progress is being made in the right direction.

THE SEPARATE SEWERAGE SYSTEM.

Resolutions recently adopted by the State Board of Health, relating to the condition of sewers in large cities, call attention, in a very direct manner, to a very important subject. It is well known that most of the sewerage system in large cities is based on a so-called mixed principle—the surface-drainage, rain wash, and house-sewerage emptying into a common receptacle. With a capacity equal to the most pressing emergencies of the heaviest storms, the large sewers are, on ordinary occasions, in the condition of spacious caves, along the floors of which slowly courses a stream of concentrated filth. The damp walls of these caverns, aided by the attending conditions of heat and dampness, favor the formation of bacteria, and thus tend directly to the spread of the numerous zymotic diseases which are so commonly associated with sewer systems in general. Of course, we do not pretend to say that there is anything particularly new in this, but merely refer to it by way of showing the reasons for the recommendation by the Health Board of the so-called "separate system" of sewerage. We have always believed in its principle, and are glad to know that the Health Board has, in a formal and public manner, given it its sanction. The utility of the measure has been strikingly exemplified in the case of Memphis, which has been transformed from a pest-hole to a comparatively healthy city; and the same might be proven doubtless regarding other cities not a hundred miles away.

THE PAY OF THE LATE PRESIDENT'S SURGEONS.

Of late there have been many rumors as to the amount of so-called pay which will be tendered to the surgeons in attendance upon the late President. We have reason to believe that no amount has as yet been settled upon by the committee having the matter in charge. The surgeons have not presented any bills, nor is it at all likely that they will. Such services as were rendered by them should be rewarded by honoraria from the Government. There is a disposition to do so on the part of Congress, as manifested in the cases of Surgeon-General Barnes and Surgeon Woodward, both of whom will doubtless be advanced in rank, and will receive in addition the formal thanks of both Houses. This is as it should be, and the action will be indorsed by the medical profession and the entire people. To the other gentlemen the nation cannot be too liberal. The case was a peculiarly responsible one from first to last, and virtually commanded the undivided at-

tention of all connected with it. It is safe to say that nowhere in history has an instance been known in which there was more devotion shown to any patient, and more care taken to minister to his pressing needs, than in that of the late President.

The committee cannot err on the side of liberality to all concerned, and in any case of doubt as to the amounts to be recommended should be free to seek advice from different representative medical men throughout the country. If any of the figures lately published apportioning sums to each of the attendants are true, they are much below the average of what they should be. The nation certainly is generously inclined toward the surgeons, and the committee in Congress will, it is to be hoped, interpret the sentiment accordingly.

THE HÆMIC CRISIS IN FEVERS.

M. Hayem, whose name is familiar as a contributor to the physiology and pathology of the blood, has recently announced some new discoveries in this direction.

The termination of all acute fevers is accompanied, he says, by a profound modification in the constitution of the blood. This has, in its constancy, time of appearance, intensity, and ephemeral duration, every characteristic of a true crisis, as that word is understood at the present day.

The phenomenon in question consists of a sudden and rapid increase in the number of hæmatoblasts, followed by an almost equally sudden decline in this number, and subsequent increase in the red-blood globules.

In the normal state, according to Hayem, there is about one hæmatoblast to twenty red-blood globules. In fevers this ratio changes, the proportionate number of hæmatoblasts becoming somewhat greater.

At the time when the thermic crisis sets in, the hæmatoblasts begin to increase very rapidly, and within eighteen hours their number has doubled. The increase then becomes slower, and within a day or two has ceased. The curve of this hæmic crisis is, therefore, a very sharp one.

During fevers there is a less active renovation, or less complete supply of red-blood globules than in health. At the crisis there is a sudden pouring into the blood of the hæmatoblasts. In a few days this increase stops, but meanwhile the red-blood globules have increased, until, as convalescence progresses, the normal ratio is obtained. It is noted, however, that these new red globules are defective in hæmoglobin, and that there is consequently a slight anæmia, despite the numerical richness of the blood in globules. The normal condition of the blood is not brought about until the end of convalescence.

M. Hayem asserts his views regarding the above-described phenomena with much positiveness, and there is no especial reason to doubt the facts that he gives. His statements as to the existence of a post-febrile anæmia tell us nothing new. In fact, his so-called "hæmic crisis" is chiefly, if genuine, a thing of theoretical interest. Nevertheless, a knowledge of its possible existence may be of value, as serving to enforce attention to the fact that the blood is, in fevers, a diseased tissue, and should be watched by the physician.

Reviews and Notices of Books.

Sensation and Pain. By Charles Fayette Taylor. 12mo. New York: G. P. Putnam's Sons. 1881.

This little monograph is the embodiment of a lecture delivered by the author before the New York Academy of Sciences, as one of the public course for 1880-81.

The subject is treated in as clear a manner as the present advanced, though still unsatisfactory, state of psychological science permits, and the conclusions drawn are logical.

Several of the phenomena of what science is pleased to call imagination, for lack of a more definite term, are forcibly illustrated by appropriate anecdote, and the author has shown how it is quite possible for the pretensions of charlatanry to induce false beliefs of apparently wonderful cures in the minds of susceptible and unobserving individuals.

Opium-Smoking. By H. H. Kane, M.D.

The author of this little volume very ably discusses the origin and spread of opium-smoking in America; its effect on the different systems and organs; and explains how all the symptoms heretofore considered dangerous and distressing, may now be easily and effectually met.

Aids to Rational Therapeutics. By J. Milner Fothergill, M.D., M.R.C.P. New York: G. P. Putnam's Sons. 1882.

The book abounds in common-sense prescriptions. It is perhaps unfortunate that most of them call for rather unpalatable and bulky mixtures. The advantage of elegant and compact prescriptions, when not incompatible with efficiency, cannot be too strongly impressed upon the minds of students.

Nervous Diseases: Their Description and Treatment. A Manual for Students and Practitioners of Medicine. By Allan McLane Hamilton, M.D. Second Edition, Revised and Enlarged. With Seventy-two Illustrations. Philadelphia: Henry C. Lea's Son & Co. Pp. 578. 1881.

The present edition of this work has been considerably remodelled and enlarged. New illustrations have also been added. The author introduces his subject with some concise and useful directions regarding the modes of examining the patient, making autopsies, and preserving and studying the nervous tissues. A chapter on instruments for diagnosis and treatment follows, which is not very complete, though perhaps sufficiently so for practical purposes. The author does not give a correct account of the present condition of cerebral thermometry. Armidon's experiments are not referred to, nor the

later ones of Bert, Franck, and Lombard, which throw so much doubt over the value of this method of investigation. The description of electrical apparatus and of the mode of application of that agent is very meagre.

The different diseases of the nervous system are then taken up in the usual order. It is, we believe, a mistake not to recognize functional diseases as such by distinctly classifying them. There is no evidence that such diseases as hysteria, catalepsy, paralysis agitans, chorea, etc., are, in any proper sense, spinal diseases. However, Dr. Hamilton's classification is convenient, and is, perhaps, as good as any.

The author treats of the different subjects concisely, as is necessary, yet for the most part all that is practically needed is given. A greater familiarity with the microscope and with pathological appearances is shown than is usually the case with American authors. There are frequent citations of illustrative cases also, which make a valuable feature of the book. Considerable original matter is introduced. The author refers to his introduction of nitro-glycerine, and he still commends it in epilepsy and other conditions. He also continues to speak well of nitrous oxide in melancholia and cerebral anæmia, though we are left in doubt of the permanence of the good effects.

The author has aimed to present the subject of nervous diseases in a clear and compact manner, for the benefit of those who have not time or patience to grapple with more formidable treatises. We think he has succeeded, and that his book will prove to be a very useful one.

Lectures on Electricity (Dynamic and Franklinic) in its Relations to Medicine and Surgery. By A. D. Rockwell, A.M., M.D. New York: William Wood & Co. Second Edition. 1881.

This is a series of six lectures, which present very clearly as much as can be given in such space.

The author speaks rather too confidently of the brilliant results of electrical treatment. He is also somewhat premature in formulating so fully the value of static electricity. The book is, in the main, however, a very well condensed and trustworthy manual.

Frozen Sections of a Child. By Thomas Dwight, M.D., Instructor in Topographical Anatomy and Histology in Harvard University, etc. With Fifteen Drawings from Nature by H. P. Quincy, M.D. New York: William Wood & Co. 1881.

This is a series of fifteen plates, reproducing an equal number of drawings made from freshly prepared transverse sections through the frozen body of a girl, aged three. The plates are of life-size, and are accompanied by careful explanatory notes, which call attention to many obscure but interesting points in topographical anatomy. The work is almost unique, treating of human anatomy as seen at an age much earlier than that of the subjects usually selected. This fact does not, however, militate against its usefulness, since all deviations from adult anatomy are carefully indicated. The preface contains practical suggestions concerning the preparation of frozen sections, for the value of which the author's large experience is a sufficient guarantee. The book is provided with a good index, and is printed in beautifully clear type upon excellent paper. It deserves to be welcomed as a valuable contribution to the department of medical science of which it treats.

Reports of Societies.

MATERIA MEDICA SOCIETY.

Stated Meeting, Thursday, January 26, 1882.

Dr. Henry G. Piffard, President, in the Chair.

The paper for the evening, entitled

MERCURY AND OTHER REMEDIES IN THE TREATMENT OF SYPHILIS,

was read by Dr. G. H. Fox. The author proposed to present certain views regarding the treatment of syphilis, which had resulted from his study and experience. He did not present them as novel and original. They were simply his own opinions on points of interest and practical importance, and he offered them for whatever they might be worth. He commenced with mercury, and embodied his remarks in the form of propositions:

First.—In the treatment of syphilis mercury is naturally the most valuable curative agent of which we have any knowledge. The positive results which follow its employment are such as to convince any competent observer as to its efficacy.

Second.—Mercury is an overrated remedy. The fact that a remedy will do much is no sign that it will accomplish everything that may be desired of it. It will lessen the manifestations and shorten the natural course of syphilis in most cases, but it will not always produce a speedy and beneficial effect, as most physicians are inclined to believe. Some of the worst cases of syphilis in my practice have occurred in patients to whom I gave mercury for one or two years.

Third.—If the profession generally were more strongly impressed with the great value of hygienic measures in the treatment of syphilis, and were less inclined to confide solely in the specific action of mercury, I am convinced that patients would receive a far greater amount of benefit. Remedial agents often acquire a fictitious value by reason of the fact that patients improve during their administration. We know that mercury is not inert, and have ample proof that it can and does accomplish a great deal. The improvement which takes place in our syphilitic patients when treated is not wholly the effect of mercury. It is due in great measure to the vis medicatrix.

Fourth.—Mercury is not essential to the cure of syphilis. This disease, like other erythemas, tends to run its course. It may be severe, and, in that instance, terminates fatally. In the majority of cases, it is a far less malignant disease than it is supposed to be. If the patient is of sound constitution and the infection is mild, it usually runs its course without injuring the health of the patient. It may be said that such patients will suffer more from severe lesions in later years. I believe that these patients are as thoroughly cured as though they had taken mercury. I have seen hale men of advanced years who have had syphilis in their younger days and have received no specific treatment, so that I cannot believe that mercury is essential to the cure of the disease.

Fifth.—The internal administration of mercury is preferable to the inunction, vapor-baths, etc., in every case for the cure of constitutional disease. A somewhat extended trial of mercurial inunction has led me to abandon it. It is but just for me to say

that my experience with the vapor-baths and hypodermic injections has been very limited. They possess no advantages over the method of internal treatment which I can recommend, nor can they claim the merit of simplicity.

Sixth.—The dose of mercury usually given to syphilitic patients is unnecessarily large. From the time when the beneficial effect of mercury was estimated by the pints of saliva which dribbled from the patient's mouth, there has been a sudden tendency toward diminution of the dosage of this drug. I believe that in the vast majority of cases the very best effects on syphilis may be obtained by the employment of doses which will not incur the slightest danger of salivation. I have no faith in the administration of doses upon the homœopathic principle. The daily dose of one-half to one grain of the biniodide will do more good than two to three grains. Regarding the choice between metallic mercury and the numerous salts, I am not prepared to speak. The protiodide given in the form of trituration will not cause gastric disturbance. In the late stages of syphilis, I have followed the custom of changing from the green to the red iodide. In my own experience, I have never observed any benefits result from the combination of various salts, as recommended by Bumstead, or by the frequent change from one preparation to another.

Seventh.—The duration of mercurial treatment should vary according to the character of the case. There are cases of mild and cases of severe syphilis. Mild syphilis does not demand mercurial treatment.

I do protest against treating all cases of syphilis upon a routine plan. Many writers on syphilis lay down the absolute rule that the disease must be treated during a certain specified number of months or years, without even hinting that, for various reasons, one patient may not require as much treatment as another. In our text-books of the present day the description of syphilis rarely corresponds with the average case in practice, but it is the description of the superior and comparatively uncommon forms of the disease. The question is not what the disease is capable of doing, but what it is likely to do. There are cases of syphilis which demand two, three, or, perhaps, five years of treatment. But it seems to me to be utterly impossible to fix a certain time as the duration of treatment for all cases. When the early symptoms are slight and disappear under treatment, I deem it quite necessary to continue the use of mercury for two or three years to entirely eradicate the disease and prevent subsequent manifestations. Late lesions of syphilis frequently do occur after prolonged administration of mercury. My own practice is to give mercury in every case during the existence of any symptom of the disease, whether it occurs early or late. In the early period I continue the use of mercury for six months after the last symptom has yielded. I then stop the administration of the drug and await further developments. If the symptoms reappear, I resort again to the use of mercury, and continue for perhaps two or three months after the disappearance of the latest symptoms. In late syphilis I give mercury to subdue any growing symptom and then stop.

IODINE AND ITS COMPOUNDS.

Iodine has been strongly recommended as an antisyphilitic remedy by various writers. The drug is rarely employed, and appears to me to have fallen into disuse. In oral lesions I have obtained such satisfactory results from the use of iodine that I am inclined to believe that in such cases where mercury produces little effect, iodine would be advantageous. It is the prevalent belief among authoritative writers that the iodide of potassium has no actual curative effect in the treatment of syphilis, but merely a power to cause the disappearance of certain symptoms, and furthermore, that it has little or no value in the early stages of the disease. I believe that in the earlier stages of syphilis, iodide of potassium is an invaluable therapeutic agent. In many cases of chancre characterized by massive induration I gave the iodide of potassium, and apparently with the effect of reducing its size. In the stage of efflorescence I must admit that the drug has little or no effect upon the cutaneous manifestations. Still, as the drug causes an increase in the number of blood-corpuscles, it has the same right as mercury to be ranked as a tonic. In ulceration of the tongue and mucous patches I have seen good results following the iodide of potassium, when mercury had been given for several weeks with no effect. In the cure of cephalalgia and arthritic pains associated with the first outbreak of syphilis, the iodide of potassium displays its remarkable power. Of the great value of the drug in late syphilis I need not speak. Its power is often exerted in a most brilliant manner when its administration is preceded by a course of mercurials. I can recall cases of syphilitic orchitis where the drug has been seen to have little effect, but on resuming the iodide of potassium after a course of mercury, the swelling of the testicle was lessened with surprising rapidity. The iodide is best prescribed in an aqueous solution, a cubic centimetre containing one grain of the drug. Iodide of potassium is a remedy which no patient ought to be compelled to take for a great length of time. It does its work quickly or not at all. When unnecessarily continued it is sure to do harm. It is undoubtedly true that a five-gramme dose will sometimes accomplish a result when four grammes will produce no effect. For every case of syphilis which I have seen benefited by immense doses of the iodide I have seen at least two cases in which large doses have done harm. Several physicians have told me of cases of syphilis in which the symptoms were frightful to an extreme degree, and could only be kept in abeyance by the continuous administration of immense doses of iodide of potassium. I cannot from my own experience believe that there are such cases, and I am sure that in some instances the symptoms of iodism have been mistaken for the effects of syphilis. I do not deny the value of large doses of the iodide of potassium in certain cases, but I protest against the continuance of large doses in chronic syphilis.

Where there is dyscrasia and a weakened state of the digestive organs, I have great faith in the iodide of starch. Iron is a remedy which in the treatment of syphilis is of very great value. It deserves to be ranked with mercury and the iodide of potassium. Its power to combat the anæmia which is invariably present in the early stage of syphilis renders it a most invaluable adjunct of mercury.

I should prescribe it for a patient presenting the chancre or initial lesion, and give it as routine in the secondary lesions. It tends in a slight degree to lessen the probability of subsequent manifestations. In the weakened state of the system associated with late syphilis, the value of iron is too well known to require mention, but in the early stage of the disease its value seems to be unknown or unap-

preciated. I should employ the tincture of chloride of iron in daily doses of ten to fifteen drops. Cod-liver oil is a remedy which is not infrequently of service in the treatment of syphilis. When an individual with a strumous diathesis is affected by this disease, its symptoms are apt to be severe and prolonged, and amenability to mercurial treatment is greatly lessened. In these cases the use of cod-liver oil, alone or in connection with iron, is likely to be productive of good results. In late syphilis of an ulcerative type, I have repeatedly seen mercury fail to do good at first, while after the administration of oil for a month or two, it has accomplished all the good that could be expected from its use. Of the vegetable remedies in the treatment of syphilis I am not prepared to speak at the present time. In regard to hygienic measures, I would remind you that, in many of our cases, over-indulgence in alcoholic drinks, improper food, and lack of out-door exercise have produced a condition of mind and body which complicates syphilis, and for which mercury is not a specific. Teachers of medicine impress upon the mind of the pupil the necessity of treating the disease and not its symptoms. I would impress upon the mind of every physician the duty of treating the patient and not simply his disease.

The discussion was opened by Dr. Sturgis, who spoke as follows: The writer says that he thinks mercury is the best thing to be given under the circumstances, but many cases will get on perfectly well without it. We will grant that, but I think the danger of not giving it is the risk that is run for the future. I do not think we can predict positively whether the case will turn out well or ill, no matter whether mercury be discontinued or not, and I think the physician or surgeon runs a risk in depriving his patient of mercury. With regard to the question of routine treatment, I do not suppose that any surgeon follows it absolutely in the administration of mercury. It is merely giving the best thing that can be used. Various forms of mercury and the manner in which they can be given often constitute a very important feature in the treatment of the case. I agree with the gentleman in thinking that any form of mercury is perfectly admissible in treating syphilis. There are certain preparations, however, which I do not think are of benefit. There are others which I think will work very much better than the forms spoken of. The protiodide, although a very excellent drug, I think is very much more apt to produce disturbance than other mild preparations of mercury, among these notably blue mass, with or without sulphate of iron, which acts as a tonic and which I think also prevents the ill effects of mercury either on the mucous membranes or other parts. With regard to the inunction method, I am rather surprised at the conclusion that the reader has arrived at, because, of all the methods of giving mercury, the inunction, apart from its disagreeable qualities of uncleanliness, is certainly the most effective way and productive of the least ill results. The hypodermic method is open to objections; the principal ones in private practice are the tendency which it has to produce abscesses and the discomfort which it generally produces to the patient himself. As regards the iodide of potassium, I do not believe in its efficacy in the earlier stages. I do not believe that its action is really what we would call at all curative. The reader spoke of massive indurations disappearing under its use. Undoubtedly they will; but during the initial stage and during the period of eruption of the skin and mucous membranes, in cases where the induration disappeared, it was very apt to return. I believe that the effect of iodine throughout the whole course of the disease is purely evanescent and temporary. The later stages of the disease require mercury for their thorough cure and thorough disappearance of symptoms. Where headaches occur large doses of iodide of potassium will sometimes produce a quick result. But I have noticed where the iodide has been used, the effect is lost much more quickly than if a small dose of mercury be at once commenced and continued until the symptoms are permanently and definitely relieved. I believe that preparations of iodine are of most use, principally for the relief of symptoms, in cases where ulcerations have occurred. I consider that the action of iodide of potassium has been vastly overrated, and, although I think it is an excellent assistance, I do not by any means regard it as the essential point in the treatment of the disease. With regard to tonics, etc., the remarks were undoubtedly well made. The syrup and the various other preparations of the iodide of iron are exceedingly good; the syrup is the one form that I prefer to others. I like that better than the tincture of the chloride of iron, although the latter is a good preparation. The iodide of starch and the iodide of sodium have rather disappointed me; I do not think they are of very much service. I have never been satisfied with the results that I have been able to produce with the iodide of starch. Within the last year I have practically given up the use of it. As regards the combined use of mercury and the iodide of potassium, I think the effect which he thought was produced by the iodide was really produced by the mercury. Iodine seems to produce solution of the mercury and render it very much more active. We find if after a course of mercury iodine be used, the effects of mercurialism are noticed in the slight ptyalism and diarrhœa, where mercury alone has produced no such result. In the case spoken of, I am inclined to believe that the result occurred from the mercury and not from the iodide of potassium. In syphilis you will often find patients who do not seem to respond to the use of mercury. It produces no results either physiologically or toxically.

If purgatives or tonics be given while mercury is suspended, you will find the absorptive power very easily increased. I belief that if the use of mercury be abandoned in the treatment of syphilis, it would be bad for both surgeon and patient. The latter would be very much more likely to show evil results of the disease than where the proper course of mercury is given, and where it is properly administered during the course of the disease. In the treatment of syphilis and in the intermittent way of giving mercury, I fully agree with the reader of the paper.

Dr. Johnson: The reader drew a parallel between syphilis and scarlet fever. I have always understood that certainly there were cases of syphilis that were mild, and cases that were severe, but I have always supposed that the mildness or severity of the case depended entirely upon the constitution of the individual who was afflicted with it; while in scarlet fever, measles, small-pox, and other exanthematous diseases, where we have mildness or severity of disease, it is generally attributed not so much to the condition of the patient, although that not infrequently modifies it to a very great extent, but more generally to climatic influences or sanitary surroundings. Thus, for instance, we are now in the midst of an epidemic of scarlet fever which in a great num-

ber of instances is exceedingly severe, even in families who are in the midst of good hygienic surroundings. I should like to know what the reader of the paper means by his mild and benignant disease, whether he wishes to consider the parallel drawn as original, and whether syphilis is a disease which is subject to the like laws and manifestations with other exanthematous diseases. With regard to the point which was made by Dr. Sturgis on the use of mercury and iodide of potassium, the iodide of potassium rendering the mercury more evident. I would say a few words—I think there can be no doubt that the iodide of potassium renders the mercury which has remained inactive in the system for a time much more active. It certainly acts in an analogous manner in the case of lead. The iodide of potassium is not infrequently used as a remedy in lead-poisoning; very often when its use is first begun, and the system is brought under its influence, the symptoms of poisoning are increased. No doubt by its prolonged use it helps to eliminate the lead from the system; but the first stage in that process of elimination is marked by an increase in the activity of the lead and an increase in the poisonous symptoms.

Dr. Castle: I agree with Dr. Fox in the statement he made regarding the different ways in which different persons are affected by the disease. I have seen quite a number of cases that were quite mild. These I treated with mercury, more because I believed that my duty required that I should give it, with a view to prevent subsequent developments, than because their condition at the time required active medication. In such cases I have combined it, as in others that were more severe, with the use of tonics, and as thorough attention as I could secure to the hygiene of the patient, which I consider in the treatment of syphilis to be quite as important as specific medication. I believe, as the writer of the paper does, that the natural tendency of the system to recover from the effects of the poison is great enough to be of service in its treatment, and that this power of recuperation differs greatly in different persons. In using the iodide of potassium, as I have done, sometimes in combination with the mercury, sometimes by itself, most commonly in the later stages of the disease, I have had two points in view, viz., the influence of iodine in producing the absorption of such pathological deposits as were about to take place in a disease of this character, and also in relieving the pains which are liable to occur in the later stages of the malady. I believe that it is only in this way that the iodide of potassium, or any of the iodides, can produce any specific effect. As soon as the iodine is eliminated from the system its effect ordinarily ceases, and to secure it the iodide must be continued for some time."

Dr. Smith: Some of the important facts in the paper have already referred to what had occurred to me, and although not in the line of treating much syphilis, I have to see it all the time in primary, secondary, or tertiary form. Young men are thus taught very frequently that mercurials and the iodides are specifics in the treatment of syphilis, and not sufficient stress is laid by teachers upon the importance of resorting to other means of aiding those remedies. I do not refer now to the use of other means to the exclusion of mercurials and iodides, but to using other remedies as aids to mercury and the iodides—the very point that Dr. Fox brought out so prominently. I am satisfied that in many cases I have seen mercury produce very little effect upon the advance of syphilis, but after the administration of tonics, the surrounding of the patient with good hygiene, and improvement of the general condition, particularly of the digestive assimilative powers, the mercury has produced much more decided results. I am not so sure but that Dr. Fox made a very important point, to which two of the gentlemen in referring to it did not seem to assent. I confess that I am not inclined to feel that the effects of giving large doses of iodides are evanescent. I question very much whether it would be safe to recommend the administration of iodide of potassium in increasing doses until you get certain effects in order to control the tertiary forms of syphilis. I speak upon it because in using the iodide of potassium in the case of a lady who was past sixty, and who had led me to believe, and the opinion was confirmed by other observers, that there was a syphilitic taint, the iodide of potassium produced at first a very good effect upon her but finally developed a permanent difficulty in the way of throat and nasal troubles which never disappeared. That led me to study the subject, and I believe that I have seen permanent results from the continued use of iodide of potassium, which I was inclined to disbelieve before. The winding up of this paper seemed to me again to be most practical and excellent, and that is that we should remember the patient as well as the disease, more decidedly the patient than the disease.

Dr. Morrow: My plan of the treatment of syphilis has been the orthodox one of giving mercury and iodide of potassium in all stages of the disease, of course with proper discrimination. But I treated quite a number of cases without mercury, and I can only state that I have not been able to observe any difference between the evolution of the secondary symptoms in these cases and those of other cases that I was treating at the same time with mercury. These cases that I refer to may have been exceptionally mild. In one of them I had to resort to mercury because there was an iritis developed which I did not think could be controlled by any other plan of treatment. But I have no faith in the absolute curative power of mercury over syphilis. I believe that it may suppress certain manifestations of the disease, but I do not think it can eradicate the poison or correct the diathesis. It is a matter of interest to note the fact that twenty-five to thirty years ago the plan of treatment recommended for the cure of syphilis was to give mercury for a few months—perhaps six to twelve months—that was thought to cure the disease. But later on this treatment was extended from eighteen months to two years. Now, I think the best syphilographers are of the opinion that a mercurial course ought to be continued for at least four years, even if there be no manifestation of the disease at that time, simply with a view of protecting the individual from subsequent manifestations, sometimes occurring ten to twenty years later. "I think that the change which has taken place in the treatment of the disease is an evidence of a growing lack of faith in the curative properties of mercury.

In regard to the use of iodide of potassium, I have, of course, given it in what I considered sensible doses, but have never given it in those enormous doses of 700 grains per day and upward, and should be very much inclined to doubt the propriety of doing so. I think there are many cases of syphilis which would get along just as well without any treatment, except a simple tonic one, as they will under the influence of mercury and iodide of potassium.

Dr. Bronson: I would express my concurrence fully with the views of that radical paper. I think it is high time that something be said to combat the dicta of Fournier with regard to the routine treatment of all cases of syphilis. I think there is sufficient authority on the other side which would justify us in regarding some cases as not requiring mercurial treatment to any great extent. For my own part, I would not feel justified in neglecting mercurial treatment in any case. Certainly, there is no remedy for the treatment of syphilis that can compare in efficacy with that of mercury, and I would consider it my duty in every case to begin treatment with that drug. I do not, however, by any means feel that I am required to pursue this treatment for four years, or for any long period, if on the development of the case it proves to be a mild one, and is not likely to materially damage the patient's health. With regard to the form of the mercurial, the sanction of the profession is that the one should be chosen which is most easily assimilated. I think that the principle in giving the iodides is to facilitate the absorption of mercurials, thus enabling us to accomplish with small doses what formerly we could only do with large ones. It seems to me that the most scientific plan of giving mercury would be the hypodermic injection, for the reason that we know precisely the amount of mercury given. In this way the proportion eliminated by the kidneys corresponds more nearly to the amount given than when it is administered in any other form. It would seem as though we could anticipate the most uniform results when given in this way. The inconvenience of the method, however, is an objection to such use, and I have almost entirely given it up myself for this reason. I think that of all the remedies the bichloride is the most reliable. We can accomplish, perhaps, nearly the same thing by means of triturations, as a trituration of calomel with sugar. It seems to me that in very many instances the enormous doses of the iodides which have been given were necessitated from the fact that the remedy was administered continuously. Very frequently, with a dose of twenty grains three times a day, and intermitted to be recommenced after five days, we can continue a much smaller dose than if the same dose was continued without remission. There is no question that in many cases of nervous syphilis the iodide of potassium is required in very large doses, but these will have to be very much larger if the remedy is given continuously.

Dr. Piffard closed the discussion. He said: The paper is exceedingly interesting and exceedingly important. But there are between thirty and forty different propositions, some of which I agree with thoroughly, and some of which I dissent from most radically. There are three points, however, that, from a pharmaceutical point of view, I think attention should be paid to. Dr. Fox spoke of the benefits he derived from the use of iodine alone in syphilis, and mentioned in that connection that he was in the habit of giving Lugol's solution. There is more iodide of potassium in that than iodine. In speaking of the use of iodine, he did not refer to the iodide of starch at that time, but brought it in afterward. The iodide of starch is iodine pure and simple, not combined with starch, but a simple mixture. In the third place, he spoke of the solution of iodide of potassium in water. In giving a cubic cent. of that solution, we would not give a gramme of the iodide of potassium, but less. If you mix them, you will find that by adding 100 grammes of the iodide of potassium to 100 c.c. of water you will get, not 100 c.c., but, because of the swelling of the solution, you will have a larger volume of fluid. Moreover, the solution turns red after a time. It may be kept thoroughly well by using some substance as a preservative; for instance, the carbonate of potassium, and ordinarily commercial iodide of potassium of the shops will keep longer in a saturated solution than the chemically pure iodide of potassium.

Dr. Sturgis hereupon asked if the keeping of the iodide did not depend upon its being shut out from the sunlight. He said that the commercial medicinal iodide is worth just one-fourth the chemically pure.

In conclusion, Dr. Piffard called the attention of the society to a preparation of carbolic acid which had been prepared by Mr. Milhau, of this city. As a rule, carbolic acid became discolored, but this preparation would, it was stated, not change color.

Dr. Piffard was further assured that the best grades, so far, of pure carbolic acid yield only about one-fourth of their weight of this preparation. It certainly was beautiful in appearance, being the only sample of carbolic acid that he had ever seen that showed the crystalline formation as handsomely as this.

Dr. Sturgis remarked that he had seen samples of Merck's carbolic acid, showing very nearly as handsome crystals and as free from fluid as that passed around.

The society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 2, 1882.

Fordyce Barker, M.D., LL.D., President, in the Chair.

Dr. F. A. Castle read a paper, entitled

SOME PRACTICAL SUGGESTIONS IN THE TREATMENT OF THOSE DISEASES OF WOMEN WHICH EVERY PHYSICIAN MAY BE CALLED UPON TO CONSIDER.

The speaker began with the practical statement that a thorough knowledge of the patient, such as pertained to derangements of other portions of the body than the uterus and its appendages, hereditary tendencies, etc., was necessary to a proper appreciation of the real affection for which she should be treated.

Most physicians in general practice had met with women, between forty and fifty years of age, who suffered from two to four years with peculiar

DISTURBANCES OF THE NERVOUS SYSTEM COINCIDENT WITH THE MENOPAUSE,

and yet it was a remarkable fact that, of English authors, Lawson Tait and Robert Barnes were the only writers in the special department of diseases of women who had given much information concerning this class of cases and their management. The result had been that the treatment consisted largely in the encouragement that "these symptoms will disappear when the menopause has been fully established and the system has become accustomed to the great change." Attention was directed to one of the numerous phenomena manifested at the change of life—namely, "frequent attacks of *flushings*, or heats," as Ringer describes them, starting from various parts, as the face, epigastrium, etc.,

thence spreading over the greater part of the body. "Sometimes, although the patient feels deeply flushed, the skin remains natural. The sensation of heat may be so urgent that the patient opens her clothes or removes the greater part of the bed-covering, and even throws open the window in the coldest weather." "These heats may last a few minutes, an hour, or more, and may be repeated a number of times a day. They are generally followed by perspiration, often profuse; at other times the skin remains dry, and they are accompanied by great throbbing throughout the whole body, followed by prostration. In many cases palpitation or 'flutterings at the heart,' occur on the slightest excitement, or even without apparent cause.",

For the relief of these symptoms drastic purgatives, frequent removals from home at short intervals, frequent small bleedings, bromide of potash, and nitrate of amyl had been recommended. The bromide of potassium was, perhaps, the remedy most commonly used, but he had not seen much benefit follow its administration. He had used amyl nitrite with benefit occasionally. The remedy which had given him the best results was *arsenic*, Fowler's solution, three to five drops three or four times a day, used with the customary precautions concerning its administration, and continued for a long time. In his experience the patients had been either relieved entirely or the severity of the attacks had been materially lessened.

Dr. Castle next directed attention to the subject of

UTERINE DISPLACEMENTS,

and spoke, first, of over-distention of the abdomen with flatus as one of the causes of prolapsus uteri and other forms of uterine malposition.

For some time he had been led to regard this factor as an important one in the etiology of prolapsus, and, in the treatment of this form of displacement particularly, he regarded it as essential to resort to measures calculated to correct indigestion and keep the alimentary canal free from flatulence, as well as to use mechanical supports for the uterus. He had not seen any mention made of this etiological factor in any of the books on uterine diseases.

With regard to retroflexion or retroversion and fixation of the fundus to the anterior wall of the rectum by adhesion and interference with the function of the bowel, he had noticed one symptom of which he had not seen any mention made, namely, hemorrhage not due to hemorrhoids. He had been in the habit of treating such cases by a modification of Dr. Campbell's pneumatic method, and, in addition to distending the vagina, had at the same time distended the rectum with air. His results had been, by the use of the combined vaginal and rectal distention, that defecation had been rendered more satisfactory, and the hemorrhage had been diminished in severity. It was not to be expected that retroversion of the uterus would be cured by this method.

The next topic to which Dr. Castle directed attention was

AN ANTEVERSION PESSARY,

which consisted in a modified Albert H. Smith retroversion instrument, and had answered the indications as well as any mechanical appliance he had ever tried.

The method he employed for changing the shape of hard-rubber pessaries was then demonstrated, and consisted in oiling the instrument thoroughly with sweet-oil, heating it in the flame of a spirit-lamp, bending it into the desired shape, and, while held in that position, dipping it into cold water, when it promptly became inflexible.

In this instance the modification was somewhat like the "double horse-shoe" anteversion pessary of Gehrung, made by bending a single-lever Hodge instrument upon itself, as the anteversion pessary produced from the ordinary Albert H. Smith retroversion pessary—one of a little more than the usual length served the best purpose—was like the "cradle-pessary." To prevent it from twisting and becoming displaced, it should be compressed somewhat laterally at the angles where it was bent upon itself.

The theories with reference to the action of pessaries were discussed briefly.

Attention was then directed to the dangers and the benefits following the use of

VAGINAL DOUCHES

of hot water. To prevent entrance of water into the uterus the central aperture in the nozzle of the syringe should be plugged, and further safety was secured by bending the nozzle and plugging the holes on the convex surface. Dr. Castle endorsed all that Dr. Emmet had claimed for the efficacy of this measure in the treatment of pelvic diseases. He doubted the special efficacy of medicated vaginal injections, but believed that the benefit to be derived from the use of the hot water could be increased by the addition of common salt. His method of using the vaginal douche was to have the patient resort to it while taking a hip-bath.

The discussion was opened by DR. H. T. HANKS, who regarded the points referred to by the author of the paper as of practical importance, and he had been especially interested in what had been said concerning the troublesome class of cases seen in connection with the occurrence of the menopause. He also thought that many could bear testimony to the truth of the statement made by Dr. Castle, concerning flatulence as one of the causes of uterine displacement, particularly prolapsus. At least, prolapsus was very commonly complicated with constipation, flatulence, and indigestion, and the former was very much aggravated by the latter.

With reference to retroversion, with fixation and the occurrence of hemorrhage as a symptom, he thought it might be true during the first three months, but, when the condition became chronic, hemorrhage from the bowel did not occur; it was present only during the inflammmatory stage of the retroversion, with cellulitis.

With regard to anteversion pessaries, he had not yet found one which acted satisfactorily. He had not yet found Gehrung's instrument in the position in which it was introduced, and he had had occasion to remove more than twenty of them. He could say the same of Dr. Thomas' latest anteversion instrument, and he had removed three within the last week. The instrument kept the uterus up, but Dr. Hanks thought that it did not do it in the best way. He had found the short anteversion pessaries, which simply passed up in front of the uterus, of little use, and, in the vast majority of cases, the so-called short anteversion pessaries did much harm when left undisturbed for two weeks. From a long experience at the Demilt Dispensary, and a somewhat shorter one at the Woman's Hospital, as well as from his private practice, he was *certain* that he could treat successfully all cases of anteversion without pessaries, except when it was accompanied

by prolapsus in the first degree. When that condition existed, he had been well pleased with the use of Thomas' *hinge saddle-pessary*, and believed that others would find it effectual. The pessary to which he referred was an Albert H. Smith pessary, with a second piece for the cervix to rest upon, hinged at its wide extremity. This instrument raises the uterus from the floor of the vagina, and at the same time corrects the anteversion.

Dr. Paul F. Mundé referred to certain cases of nervous disturbance occurring during the change of life, and thought that while the symptoms might be manifold there was danger of attributing too little to them on one hand and too much on the other. The extremes should be avoided.

Concerning dyspepsia and flatulence as a cause of prolapsus uteri, he thought that the primary cause existed in malnutrition, and consequent relaxation of tissues, and although the flatulence might aid in producing the displacement and aggravated the condition, the author of the paper had laid more stress upon it, perhaps, as a causative agent than he would be willing to do.

With reference to hemorrhage, with ulceration of the rectum, as a symptom in retroversions with fixation, the statement was rather new to him, and he would take pleasure in making investigations in that direction.

He thought Dr. Castle had overlooked the fact, in speaking of the treatment by vaginal and rectal distention with air, that the rectum itself, in very many cases, was also bound down, and would prevent the uterus from being lifted forward, and therefore the method would fail in a large proportion of instances.

The cradle-pessary, shown by Dr. Castle, Schnetter devised by elongating a ring, and bending it upon itself, and he had found it useful in cases of cystocele, and also anteversion, especially when its branches were flared outward. The trouble with all anteversion pessaries, however, was that they pressed too deeply into the wall of the vagina, and, sooner or later, were sure to do damage.

He was ready to take back what he had said in his book on the "Minor Surgical Gynecology" concerning the value of Gehrung's anteversion pessary. In addition, he had found that the instrument sometimes overdid the work and *retroverted* the uterus.

He was pleased with the latest modification of anteflexion pessary which Dr. Thomas had given, namely, the open cup with a hinge. He had modified it by sinking the hinge, so as to lessen the liability to do injury to the soft parts. There were, however, two objections to the instrument: (1) it may produce erosion of the anterior wall of the vagina by pressure; and (2) it was liable to become foul from concealment of the discharges where they could not be reached by any cleansing injections.

Dr. Mundé then referred to the plugging of the central hole in the nozzle of the syringe used for vaginal injections or douches, to which attention had long ago been directed, and also to the absorbing power of the vagina which he believed existed, although not equal to that possessed by the rectum.

Dr. T. A. Emmet thought that a great deal of the difficulty encountered with reference to the displacements, and the use of pessaries, existed in the lack of correct diagnosis at the beginning. A great deal of ingenuity had been wasted, from the fact that there was not a proper appreciation always of exactly what it was desirable to accomplish.

He did not regard anteversion of the uterus as a malposition, and, so long as the view was held that it was a malposition, just so long practitioners would be misled concerning it.

One of the commonest errors made was neglecting to examine by the rectum, in order to discover whether or not inflammation exists behind the uterus in the utero-sacral ligaments. A small amount of inflammation existing there would produce those symptoms which were commonly recognized as belonging to displacement of the uterus forward. Now, with inflammation behind the uterus, if an attempt was made to correct the anteversion by the use of a pessary, disappointment would surely follow.

Another important point to be determined was, whether or not the irritation was due to the displacement, if one existed. The first impulse, nearly always, if prolapsus, or anteversion, or retroversion was present, was to correct the position of the uterus, and in his experience he had found it one of the commonest errors to attempt to force the uterus into *the* position which, as it was thought, it should occupy, without making a complete diagnosis. In such cases the use of a pessary did a great deal of harm. When the utero-sacral ligaments were inflamed the symptoms could be relieved by lifting the uterus a trifle, just enough to relieve the vessels, and sometimes that could be done by means of Gehrung's pessary, or a small india-rubber disc, or packing the vagina with cotton, so as to restore the circulation. He thought that the importance of supplementing a vaginal by a rectal examination could not be too strongly stated, for a condition of affairs could be recognized by the latter which it was impossible to determine by the former alone. It mattered but little what the pessary was, so long as the object to be attained was properly appreciated.

With regard to vaginal injections, he would simply say that the woman who would not take them lying down should be prohibited from using them. The horizontal posture was as necessary to the emptying of the vessels as it was to the emptying of the varicose vessels of a lower extremity, and should be insisted upon. He always directed the patient to pass the nozzle of the syringe toward the well side, and as a rule, that precaution would avoid throwing water into the uterus.

Dr. W. T. Lusk said that the inflammation of the utero-sacral ligaments referred to by Dr. Emmet was an exceedingly important question. About ten years ago, Schultze wrote, and insisted upon the fact, that anteversion of the uterus gave rise to no bad symptoms, unless there was an inflammatory deposit in these ligaments, and for the relief of that condition invented the cradle-pessary shown by Dr. Castle. Dr. Lusk had nearly discarded Gehrung's pessary. Perhaps, if it could be closely watched, it might be able to do much good, but in hospital practice he had always found it displaced soon after it had been inserted. He had found the pessary exhibited by Dr. Castle to be a very satisfactory instrument, but, like all anteversion pessaries, it must be removed from time to time, else damage would be done to the anterior vaginal wall.

In estimating the liability of the vaginal douche to produce serious symptoms, he thought another source of bearing-down pains, such as follow the entrance of water into the uterine cavity, should not be lost sight of, and that was excessive stretching of the vagina. In a certain number of well-authenticated cases, the vaginal injections employed after

Kiwisch's method for the induction of premature labor, had been followed by local peritonitis, due, as was believed, to over-stretching of the vagina.

THE PRESIDENT remarked that he had been interested for many years in the study of the functional disturbances incident to cessation of menstruation, and, according to his experience, laxatives and purgatives were useful in a certain class of cases and injurious in another. He regarded them as extremely useful where there was a tendency at the climacteric period to plethora, to become stout, and the patients suffered from palpitation and a feeling of pressure in the head, etc. In those cases he ordered the patient to take a saline laxative daily, for a few days, at the time corresponding to that at which menstruation usually occurred. But there was another class—that in which the patient suffered from cold feet and extremities, face flushed perhaps, tendency to vertigo, had shortness of breath on exercise, sense of depression, etc.—in which purgatives and saline laxatives would be the worst treatment, but, on the other hand, marked benefit followed the use of the bromide of potassium, eight or ten grains, three times a day, combined with iron—preferably the lactate. With reference to arsenic, there was no remedy more efficient in cases in which a nervetonic was needed, and in which the sense of depression and exhaustion were prominent symptoms. It was a remedy which he had used and recommended for many years, and with very satisfactory results. He had found it almost a specific in the class of cases in which there was a small loss of blood daily, perhaps not more than a teaspoonful, but sometimes prolonged for weeks, and accompanied by great depression, though not the cause of it.

The President did not think that flatulence ever gave rise to anteversion of the uterus. In his early practice, when he had charge of a large clinic for diseases of women, and subsequently when in charge of a large hospital practice, he had not seen it as a cause of displacement in that class of patients, although he had watched for it in private practice among those in good circumstances and had met with it and made it a special indication for treatment.

As was well known, he was not an enthusiastic advocate of pessaries, and his conviction was that displacements had received more attention than certain general pathological conditions which were of infinitely greater importance, and, when removed, the uterus would of itself recover its position perfectly. He believed that it was a mistake very commonly made to regard the uterus as an organ which occupied a positive fixed situation; for it is constantly changed by the condition of the intestines, the bladder, position of the patient, etc., and the changes in position during utero-gestation are very marked. When, therefore, the attempt was made to treat it as though it should occupy a fixed position, a mistake was very liable to be made, inasmuch as its normal and physiological changes in position were extensive. He had found retroflexion, due to flatulence, very frequently, and had for many years made use of measures intended especially to correct that condition, such as combinations of nitric acid and nux vomica, with carminatives, perhaps with morphia, and with salicine, in ten or fifteen grain doses, when malarial poisoning manifested itself. When the displacement was associated with hæmorrhoids, he gave such agents as stimulated the hepatic function, as well as kept the intestines far from accumulation of gases. With reference to Gehrung's pessary, he had removed a hundred or more within a few years, and had used it in one or two patients. For cystocele in old ladies, he had employed it with benefit, when the financial condition of the patient was such as permitted him to give the pessary the attention which it really required.

DR. CASTLE, in closing the discussion, said he intended to be understood as saying that the treatment of retro-displacements, by means of inflating the vagina and rectum, would be of service only where the rectum was not bound down.

With regard to hemorrhage from the bowel in cases of retroversion with fixation, he had seen it without hæmorrhoids, and his explanation was that it was due to an abrasion of the mucous membrane, produced by the passage of hardened fæces through the narrowed canal.

The Academy then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 27, 1882.

DR. F. R. STURGIS, PRESIDENT, IN THE CHAIR.

THE PERMANENT REMOVAL OF SUPERFLUOUS HAIR.

DR. GEORGE H. FOX read a paper on the above subject. [See p. 253.]

The paper being open for discussion, DR. C. HEITZMANN said that, at the meeting of the American Dermatological Association, in 1880, he gave an account of a series of experiments which he had made upon the face of woman in order to permanently remove superfluous hairs, all of which, as well as experiments made by others, proved to be failures. His attention at that time was drawn to a new method which a few years before had been brought forward by Dr. Hardaway, of St. Louis, who, although not the first to suggest the plan, that being done by Dr. Michel, of St. Louis, was the first to try the method upon the face of a living patient. Dr. Heitzmann had since then resorted to this method and could corroborate all that Dr. Fox had said concerning its success. Drs. Michael and Hardaway were to be congratulated for the operation, but Dr. Fox was entitled to special credit for having animated it and kept its practicability before the profession. With regard to the avoidance of large needles, mentioned by Dr. Fox, because they were likely to leave scars, Dr. Heitzmann had not had exactly the same experience. He had usually employed what might be called large needles, and had not produced scars, except in one case, and in that they were very slight. He was of the opinion that the skin of some persons was more prone to leave scars than that of others, irrespective of the size of the needles. But the scars were usually so insignificant that they were not detected except upon close inspection.

With regard to the precise agent which did the work, the thermic action or the electric current, he based his opinion that it was the heat and not the electrolytic process, upon a series of experiments made several years ago with reference to life in cartilage, and he did not see why we should assume it was the action of electricity when its existence was not established. That heat was present and aided in destroying the hair he believed; but what else occurred to aid the loosening of the hair, besides the thermic action, he did not know.

DR. GEORGE M. BEARD'S interest and experience

concerning this subject were rather historic than otherwise. Some years ago he made a number of experiments and was considerably pleased with the results. He did not use so small a needle as the one recommended by Dr. Fox, but the ordinary glovers' needle. He was annoyed, however, by the return of the hairs after he had supposed that they were destroyed. He had found that the practical difficulty of applying the method, on account of the pain, was of no special consequence, for the most nervous soon became accustomed to it and bore whatever there was with the greatest courage.

With reference to whether the destroying agent was thermic action or the electric current, he thought there could be really no question. The action was a chemical one. To be sure there was, incidentally, a thermic action, and so was thermic action generated whenever electricity was made to go through any substance, and the greater the resistance the more intense the heat. In all electrolytic operations, heat was developed—slight when a small needle was used—but it was an incident. The main action was chemical decomposition, and it was through chemical effects that the results were obtained. He admitted that some results could be obtained by the use of heat, but in the present instance he thought it impossible to get heat into the follicle as well as electricity could be sent there.

With reference to the relation which the hairy growths, referred to in the paper, had to the nervous system, he felt that Voltaire's saying was especially applicable: "The more we know the less we are sure." Probably the condition was due to some modification of nutrition, the exact nature of which was still unknown.

Dr. P. A. Morrow had seen some very satisfactory results obtained by the method, but he had not had any personal experience in its application.

Dr. A. Jacobi remarked, with regard to pulling out the hairs during the operation, that perhaps the plan he had followed in a few instances might prove acceptable. He does not pull the hair out, but leaves it as an indicator whether or not the effect has been sufficient to destroy it. If sufficient, the hair will be gone when the patient returns; if inefficient, it will remain, and the next application will suffice to make its destruction complete. With regard to the hyperæmic condition at the insertion point, he had not seen it. He had observed immediate anæmia. It was true that reaction came on afterward, and, subsequently, the localized small swellings. Occasionally there was a little tinge of color when the current was applied, but the immediate effect certainly was the production of anæmia.

Dr. W. Gill Wylie, as bearing upon the possible relation between hairy growths on the face and abnormal development of the female genitals, instanced the scrotal-like development of the labia observed in women who had an excessive amount of hair upon the face.

A member referred to the fact that he had, to a considerable extent, been successful in permanently removing single hairs, here and there, by pulling the hair out and immediately plunging into the follicle a needle, the tip of which had been dipped in a solution of some caustic.

A Mammoth Hydropathic Institute Proposed.—A number of gentlemen of this city propose to raise the sum of $100,000, and erect an "Institute" of hydropathy here.

Correspondence.

CONSULTATION WITH IRREGULARS.

To the Editor of The Medical Record.

Sir: The action of the State Medical Society in adopting sundry amendments to its code of ethics is farther reaching, perhaps, than was at first expected by even the most eager aspirants for homœopathic windfalls, and entails, moreover, a somewhat difficult question to be discussed between the respective advocates of medical "State rights" and national jurisdiction, as exemplified in the American Medical Association. That the new rule concerning consultations is virtually an ordinance of secession from the national organization must be evident to every one conversant with the perennial Ann Arbor contention; and St. Paul (meaning the city of Minnesota, not the polemic epistolist of that name) will doubtless re-echo with the invective eloquence of Chicago, fulminated more in anger than in sorrow against the "erring sister" who has out-Michigandered Michigan. For if it be an unpardonable sin in the latter State merely to lecture on the mechanism of labor before a class containing any immature believers in homœopathy, what shall be said of an official instigation to conciliate consultation fees, not only from matured and hardened Hahnemannian heretics, but from all "legally qualified practitioners of medicine"—a phrase which includes graduates from homœopathic, eclectic, and other irregular schools which the Legislature, in its collective wisdom, has seen fit to charter; all the persons to whom an irregular county society is alleged to have dispensed licenses at $10 a piece in 1874; nay, all persons who have "practised medicine and surgery for ten years last past," under any pretence whatsoever?

But attractive as may be the pecuniary prospect thus graciously opened to the yearning New Yorker, the bud of promise is not without its possible thorn. Suppose some less enlightened county society than that of the city of New York should be so lost to a proper sense of allegiance to Albany as still to wish for its representation in the American Medical Association. Its right to send delegates to this body depends upon its affiliation with its State Society; but in the present instance the latter itself becomes irrepresentable by refusing to conform with the national code. What action will be taken by such minor societies remains to be seen; it is, however, probable that outside of the metropolis there are many physicians too obtuse to perceive wherein the retention of the adjective "homœopathic," after the abandonment of its etymon "ὅμοιος πάθος," indicates an advancement from ignorance or charlatanism to rational medicine. The fact that a few practitioners who use this adjective for private *ad captandum* ends are willing to admit in professional confidence that they practise without regard to the precepts which it implies, argues rather for their intelligence than for their integrity; but even scant familiarity with the recent publications of the homœopathic school will show that, as a school, it still adheres to the Hahnemannian dogmata, that "the totality of the symptoms constitutes the disease," that such totality of symptoms is only to be cured by a drug capable of producing a similar totality of symptoms, and that the efficacy of the appropriate remedy is

enhanced by its "dynamization" *ad infinitum*. In a work bearing the imprint of 1882, and emanating from a homœopathic medical college, I find gravely recorded the cure of a case of mania by one dose of the four-thousandth potency of belladonna, and am further informed that lilium tigrinum is the proper medicine for hysteria and uterine displacements, with much other similarly instructive matter.

Aside from the incongruity of clinical conference between a regular college professor and a practitioner whom none of our colleges recognizes as fit even to give a student's certificate, it is manifest that in a majority of instances no agreement as to treatment could be reached through the farcical form of consultation. But, to meet this difficulty, it is ingeniously provided that the consulting physician may continue his visits as often as may be deemed necessary "by him." There is, however, another side to the shield thus suspended. It is within the verge of possibility that some patient under the care of an expert gynecologist may be persuaded by her homœopathic friends to desire the consultant opinion of an infinitesimalist who insists that her adherent retroflexion must be treated with the hundredth dilution of lilium; or an ophthalmologist may have to succumb to a consultant who will instruct him that presbyopia is to be relieved by an attenuation of drosera, and keratitis cured by the internal administration of diluted chalk; or a genito-urinary surgeon may be told by his casual medical mentor that an urinary fistula is to be healed with the millionth of a grain of sulphur. Clearly, if our disinterested brethren are bound to meet all "legally qualified" practitioners when they themselves are called as consultants, they are equally bound by the same amendment to ignore sectarian distinctions when the positions are reversed. Granted that the instances are extreme, and that there are among the miscalled homœopathists some sensible men, who know and utilize the scientific advances in surgery and medicine, it is certain that the picture is not overdrawn as regards many, if not most, of the homœopathic fraternity in this country; and it is equally certain that from this ultra-Hahnemannian faction will arise the noisiest howl of jubilation over the quasi-official surrender of the regular profession.

The subject is important enough to call for a more general expression of opinion than is implied in a vote at a meeting of the State Society, and it is to be hoped that the various county societies will take it into early consideration. The simple title of physician seems to me to be the only one deserving recognition; he who prefixes to it a qualifying adjective professes to be more, or less, than a physician, and thereby voluntarily withdraws from fellowship with those who will not be fettered by the dictation of any therapeutic "school."

I am, sir, yours, etc.,

A. L. Carroll.

New Brighton, February 13, 1882.

The County Hospital at Denver, Col., which was at first captured by the homœopaths, has now been turned over to the regular school. It will be utilized for the necessities of the sick, and of the local medical college.

The Colorado Medical Journal has ceased to be published, owing to the unfortunate demise of its accomplished editor, Dr. William H. Warn.

New Instruments.

A NEW OBSTETRIC FORCEPS FOR OPERATION AT THE SUPERIOR STRAIT.

By W. H. GRAINGER, M.D.,

Boston, Mass.

In bringing before the notice of the medical profession a new midwifery forceps, I feel as though I were treading on rather dangerous ground. Perhaps in no other department of medicine or surgery has any single instrument undergone so many additions, alterations, and modifications, as the one devised by Dr. Paul Chamberlain, in the middle of the seventeenth century. Many of these improvements have stood the test of time, while others, and by far the greater number, have been relegated to the realms of oblivion: and it would seem as though the field had been so completely covered that but little remained to be desired. This may, indeed, be true so far as the delivery of the head when in the pelvic cavity, or when it has reached the inferior strait. Modern skill has shown how readily such an operation can be performed, but when the head has simply engaged at the brim, it then becomes a matter of grave concern even in the hands of the most experienced obstetrician.

It is not in the province of this paper to discuss the relative merits of turning, or the resort to instrumental delivery when the head is above the brim; such a subject is fully treated of in the text-books on midwifery.

I have ever looked upon the application and proper use of the forceps at the superior strait as being one of the most difficult operations in midwifery, owing to the obstacles offered by the sacral curve and the resistance of the perineum and soft parts. In the various instruments constructed for this purpose, although the anatomy of the pelvis has been considered, and the pelvic curve added to allow of their proper adjustment, their action, from a purely mechanical standpoint, has been sadly ignored.

In order to fully appreciate the difficulties that await the operator, I will invite attention for a moment to the relation of the fetal head to the maternal pelvis at the commencement of labor. For the purpose of illustration, we will take the most common of all vertex presentations, the left occipito-iliac anterior. The uterine contractions transmitted through the spine to the head causes the chin to become flexed on the chest, producing what is known as the stage of flexion in the phenomena of labor. In this position the occipito-bregmatic diameter corresponds to the left oblique (Cazeau) of the superior strait, and the biparietal to the right oblique, and it is to this latter diameter more particularly that I wish to call attention.

Contrary to the views taught by Naegele, the head does not enter the brim with a biparietal obliquity, but in reality in the direct axis of the superior strait, as has been conclusively shown by Mathews Duncan and Leishman. This error on the part of the great German teacher is partly owing to the fact that the pelvis is inclined at an angle of sixty degrees to the horizon, a proposition which was not demonstrated until some years after he wrote his essay. It is during the stage of descent that the unscientific principle of the forceps as at present constructed becomes apparent, and I think I can prove conclu-

sively that the tractile force applied by the operator is mechanically wrong.

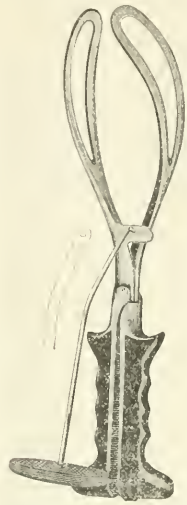
If we examine the pelvis we shall observe that it is a curved canal, the posterior wall of which forms a much larger segment of a circle than the anterior; consequently the head in its passage from the superior to the inferior strait must follow this curve, and the left or posterior parietal protuberance, traversing a larger space, has to travel more rapidly than the right or anterior, in order to preserve its parallelism to that portion of the pelvis to which it is in relation.

Now, what is the action of the long forceps? The head having been seized between its blades, the line of traction must necessarily be forward of the axis of the superior strait, as the coccyx and perineum prevent the handles from being carried sufficiently back, and most of the force is expended on the symphysis pubes, which seems to act as a fulcrum, and, despite the ill-directed efforts of the operator, causes the posterior portion of the head to traverse the whole face of the sacrum, while the anterior travels over a much smaller space. That this assumption is correct can be very easily proved by feeling for the right ear, which will be found about the centre of the symphysis pubes, wherein, if this motion of rotation were not executed, the finger would come in contact with it beneath the arch of the pubes. It can be seen at once that this rotary movement is entirely independent of the operator—in fact I might with justice assert that it is performed in opposition to his traction. This fact being clearly demonstrable, it is obvious at a glance that the object to be aimed at must be to depress the distal ends of the blades, and with them the posterior portion of the child's head, so as to imitate nature and relieve the bladder and soft parts of the mother covering the symphysis from injurious pressure. It is very true that in the directions laid down in our textbooks we are instructed to make backward and downward traction in the axis of the superior strait, but I contend that, with the forceps as at present constructed, it is a mechanical impossibility.

This difficulty struck me very forcibly some nine years ago, in a case where the head was arrested at the brim, owing to a slight contraction of the conjugate diameter. After repeated attempts to bring it down, I passed the middle and fore finger of my left hand along the shanks of the forceps, as high up as I could reach; making pressure downward and backward, at the same time elevating the handles, I succeeded in delivering, but at the expense of a pair of very sore fingers. This plan of procedure is almost identical with that so ably advocated by Dr. A. Smith, of Philadelphia, in his admirable article on axis traction. I made drawings at that time of a forceps similar in principle, but differing slightly in construction, to the one here shown, the difference consisting in using two rods instead of one.

The instrument from which the accompanying engraving has been copied is the one devised by the late Professor Elliott, of New York, with my improvement attached, and was made by Codman & Shurtleff, from models furnished by me.

About two and one-half inches from the lock you will notice a small flange springing from the upper shank and slightly overlapping the under one. This is sufficiently long to permit a uniform bearing when the handles are separated by the size of the head at full term. In the centre of the flange is a small arched piece of steel, to allow the attachment of the rod. The distance from the concave edge of one blade to a point on the opposite one is $\frac{1}{16}$ inch narrower than across the convex or posterior edges, that is, $\frac{1}{16}$ narrower than usually made. I considered this necessary to prevent the instrument from slipping, as the force applied differs radically from that exerted in using the common forceps. In the latter the traction is made in the long axis of the instrument. By examining the engraving it will be seen that when the handle of the rod is elevated, the power applied is almost in a line drawn from the concave to the convex portion of the blades. The contraction is not so great as to cause undue pressure on the head. The flange on the shank will not offer any hinderance to its introduction, as the second blade is usually found to be slightly everted when the blades are not quite parallel.



The manner of using it is simply this: The forceps having been properly adjusted and locked, the index finger of the left hand is carried along the shank of the upper blade until the little arch is felt. The rod is then seized by the right hand and held almost perpendicularly, when the hooked extremity will be found to fasten very readily. There is not the slightest danger of the rod slipping out, as the force used is in a direction contrary to that by which it can be extracted. The rod being in position, the forceps are held in the right hand, while the left grasps the handle of the rod. Make steady and uniform pressure downward and backward in the axis of the superior strait with the left hand and rod, at the same moment making counter force with the right hand on the handles of the forceps in a direction upward and slightly forward. The movement will cause the distal ends of the instrument to be depressed, and with it the posterior portion of the child's head. As the head clears the brim and descends into the pelvic cavity, the traction must be changed to downward and somewhat forward, until the floor of the pelvis is reached, when the delivery may be effected as with the ordinary forceps.

In the operation just described, it will be observed that all pressure is taken off the bladder, and the rod is made to play the part of a fulcrum, which the posterior face of the symphysis pubis is compelled to enact during delivery with the long forceps.

The objection may be raised that the rod would be a very formidable instrument in the hands of the unskilful. My answer is that such persons are not competent to perform intelligently so difficult an operation, and this argument should not militate against its usefulness. The rod being detached, the instrument becomes an ordinary forceps, and can be used for delivery at the inferior strait.

The improvements as described are the result of several years' careful observation in operative midwifery, and in presenting the instrument to the profession, I do so in the hope that it will receive a fair and impartial trial before it is either accepted or condemned.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 26, 1882, *to March* 4, 1882.

Pope, Benj. F., Capt. and Asst. Surgeon. Relieved from duty in Department of Dakota, and to report in person to the Surgeon-General for duty in his office. S. O. 42, A. G. O., February 21, 1882.

Comegys, E. T., Capt. and Asst. Surgeon. Assigned to duty at Fort Stanton, N. M., relieving Asst. Surgeon Newton. S. O. 40, Department of the Missouri, February 21, 1882.

Spencer, Wm. G., Capt. and Asst. Surgeon. Relieved from duty in Department of the Columbia, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General. S. O. 46, A. G. O., February 27, 1882.

Powell, J. L., First Lieut. and Asst. Surgeon, Fort Stockton, Tex. Granted leave of absence for one month. S. O. 19, Department of Texas, February 24, 1882.

Newton, R. C., First Lieut. and Asst. Surgeon. When relieved by Asst. Surgeon Comegys to proceed to Fort Cummings, N. M., and report to the commanding officer for duty. S. O. 40, C. S., Department of the Missouri.

Frantz, John H., Major and Surgeon. Died at Baltimore, Md., March 2, 1882.

Medical Items and News.

Vaccination after Small-Pox.—Dr. C. T. Armstrong, of Corunna, Mich., writes: "I had small-pox in 1856, treated by Professor Sagar, of Michigan University. A few days since I was vaccinated by Dr. H. B. Shank, of Lansing, and have as nice a vaccine-pock as one would care to see. I have treated many cases of small-pox in hospital and camp, also in private practice, without taking the disease."

A New System of Surgical Mechanics.—The "Transactions of the American Medical Association for 1881" contain a very concise and well-illustrated paper on the above subject, read before the surgical section by Dr. Charles F. Stillman, of this city.

Dr. Stillman, while connected with St. Francis Hospital, noticed that the professional armamentarium contained no instrument which would permit constant *local* extension of a joint, and also allow fixation at *any* angle, or *motion* if desired.

He thereupon constructed a splint possessing these properties, and the description of its various adaptations to the parts of the body and the principles governing its application constitute the paper in question. His explanations of the necessity of local extension and the production of true physiological rest thereby, are novel and conclusive, and it certainly is not without foundation that his claims for an extended use of a *local* extension system are brought forward.

Commencement of the Medical Department of the University of the City of New York.—The forty-first annual commencement of the Medical Department of the University of the City of New York was held Tuesday evening, March 7th, in the Academy of Music, in the presence of a large audience. Gilmore's orchestra furnished the music. The graduates filled more than half of the parquet space, numbering 213 in all. Two large candelabra were on the stage, and beside them two enormous vases filled with flowers. Professor Alfred C. Post, M.D., LL.D., presided as Acting Chancellor of the Medical Department of the University.

The Mott gold and silver medals, for the best and second best anatomical or anatomico-surgical preparations, were awarded to T. J. McGillicuddy, of Maine, and R. G. Bindrim, of New York, and a third one of bronze, for the best book of recorded cases of surgical clinics, to Emil Heuel, of New York. Of the faculty prizes, the first of $500, for the candidate whose general scholastic standing was the highest, was awarded to Frederick Tuttle Rogers, A.B.; the second, of $300, for the candidate passing the best competitive examination in the seven departments, to Felix Peter Shillock; the third, of $200, for the next best candidate in the same departments, to Herbert Bruce MacIntire.

John Culver Beekman delivered the valedictory address, and the Rev. Richard S. Storrs, of Brooklyn, an exordium to the graduates.

American Veterinary College, N. Y.—The annual commencement of the American Veterinary College took place on Monday evening at Chickering Hall.

Transactions of the American Medical Association.—Volume XXXII. of the "Transactions of the American Medical Association" has been sent to members, in the care of the librarian of the New York Academy of Medicine.

Interesting Letters from Drs. S. Sexton and F. A. Burrall have been unavoidably crowded out of the present issue.

Dr. Reuben A. Vance, of Cincinnati, Ohio, has been elected Professor of Operative Surgery and Clinical Surgery in Medical Department of Wooster University, Cleveland, Ohio.

The Ninth Annual Report of the New York Diet-Kitchen for 1881, gives an account of an institution which most helpfully supplements the work of the physician among the poor. The society has three kitchens in connection with the large city dispensaries. It furnishes, on prescription of a physician, well-cooked nutritious food to such persons as are unable to buy proper food for themselves.

The society also will furnish the articles needed for infant diet, as suggested in the report of Dr. Jacobi to the State Medical Society.

The Medical Student's Primer.—What place is this? This is the Pathological Society. How does one know it is the Pathological Society? You know it by the specimens and the smells.

What does that gentleman say? He says he has made a post-mortem. All the gentlemen make post-mortems. They would rather make a post-mortem than go to a party.

What is that on a plate? That is a tumor. It is a very large tumor. It weighs one hundred and twelve pounds. The patient weighed eighty-eight pounds. Was the tumor removed from the patient? No, the patient was removed from the tumor. Did they save the patient? No, but they saved the tumor.

What is this in the bottle? It is a tapeworm. It is a long tapeworm; it is three-quarters of a mile long. Is that much for a tapeworm? It is indeed much for a tapeworm, but not much for the Pathological Society.

Professor Polk's Lecture.—By an oversight Professor Polk did not have an opportunity of reading the proof of his recent lecture, and of making such corrections as he might have thought desirable. It was taken, however, as delivered in the lecture room, and, as an extemporaneous effort, is beyond criticism.

A Sanitary Convention was held at Ann Arbor, Mich., under the auspices of the State Board of Health, February 28 to March 1, 1881.

Medical Supervision of Schools.—A bill has been introduced into the Ohio Legislature which aims to secure a medical supervision of schools. It authorizes the local Health Boards to take charge of the matter and appoint some physician, not on the board, who shall make sanitary inspections and see to the proper carrying out of hygienic rules.

Malarial Hemiplegia.—Dr. George A. Collamore reports what he considers an authentic case of this rare affection in the *Ohio Medical Journal*. The patient was a boy, aged eight, who was suddenly taken with a fit on December 9th. This was almost immediately followed by complete hemiplegia of the left side, including the face. Sensation and vision on that side were completely lost, and the eyes were deviated to the left. The head would shake for hours at a time. Speech was not affected. He had a high fever. He continued in this condition for three days, when the symptoms nearly all disappeared. Twenty-four hours later he had a chill followed by fever. Two days later he had a slight fever. The patient recovered rapidly under quinia.

Malaria in Rhode Island.—This State had been free from malaria for the past fifty years until the summer of 1880. At this time an endemic of intermittent fever occurred at Nayatt. During the past summer Dr. C. V. Chapin tried to estimate the amount of the disease in the city of Providence. He obtained reports of about three hundred cases.

The Treatment of Whooping-cough by mustard-plasters to the spine at night, with cold sponging in the morning, is highly commended in a *Lancet* annotation.

The University of Pennsylvania has lately acquired, by act of Councils, a large piece of land adjoining its property in West Philadelphia. Dr. Pepper also states that within the past eleven months the sum of $265,000 has been donated.

Borax in Surgery.—The fact that borax is a powerful germicide, and yet is without poisonous properties to the individual, is clean and odorless and convenient, has not been so widely recognized as it should be, according to the Philadelphia *Medical Times*. Surgeons are strongly recommended to use it more extensively as a substitute for carbolic spray or the now popular iodoform.

Borax, we understand, has been given quite an extensive trial in some of the New York hospitals. It gives very fair results, but none that are at all extraordinary.

The Vivisection Question in the German Parliament.—A petition was presented to the German Parliament some time ago, asking for the restriction or abolition of vivisection. The matter was referred to a committee, which, through its chairman, Prof. Hüter, of Greifswald, has recently reported against the petition. The report was accompanied with a motion that, considering (1) that, in the interest of science, vivisection appears to be indispensable in teaching institutions; (2) that changes in the penal statutes in the direction desired by the petitioners have not been shown to be necessary; (3) that the petitioners have the opportunity of laying their complaints of any abuses in regard to vivisection before the local authorities who have the regulation of the teaching institutions—the house passes to the order of the day. Two of the members of the commission had expressed themselves as unfavorable to vivisection, and had proposed that all experiments on animals attended with suffering, unless they served highly important scientific purposes, should be punished with a fine of six hundred marks (£30), or a corresponding term of imprisonment. In the discussion in the House, Herr von Minnigerode proposed as an amendment that the petitions should be referred for consideration to the Imperial Chancellor. Professor Virchow denied the correctness of the statement made by the petitioners, that experiments were performed in the universities to a great extent by students. He proceeded to show that vivisection was indispensable to the progress of medical science. The Minister of Public Instruction endorsed the report, and the motion of the committee was carried by a large majority.

A Simple Means of Detecting Trichinæ.—According to John Phin, the parts of an animal that should first be examined, are the diaphragm, tenderloin, and muscles about the head and throat. In a ham, the most likely place is that part at which the muscle ends in a tendon. Cut off a thin slice with a very sharp knife, or with a pair of scissors curved on the flat. This thin section should then be soaked for some minutes in acetic acid, spread out on a thin piece of glass, and covered with another similar piece. These two slips are then pressed together. A compressorium, by means of which the plates of glass are forced together by a lever and screw, answers admirably. But better still he finds the trichinoscope, which is a compressorium holding the two glass slips, but fitted with a simple microscope on a sliding frame, which permits the examination of the specimen in each part.

His plan is as follows: a thin piece of flesh, moistened with a mixture of equal parts of acetic acid and glycerine, is placed on the lower plate and spread by means of needles fixed in wooden handles. The upper plate is then brought down on the lower one, and the screw is turned into the slot in which it fits. By turning the nut any degree of pressure may be brought to bear on the flesh, which thus is rendered so thin and transparent that any trichinæ present will be readily brought into view

Increased Sickness in New York.—There is said to have been an increased amount of sickness in this city during the past winter. Dispensaries and hospitals have been more crowded.

The following table shows that there has been an actual increase of patients in the city institutions.

	1882.	1881.	Increase.
At Bellevue Hospital:			
December	651	525	126
January	638	500	138
February	579	484	95
At the Charity Hospital on Blackwell's Island:			
December	935	615	320
January	1,014	576	438
February	997	575	422
At the Homœopathic Hospital on the Island:			
December	404	292	112
January	440	288	152
February	573	262	311

Original Communications.

ON THE LOCAL TREATMENT OF CIRCUMSCRIBED GANGRENOUS INFLAMMATIONS OF THE SKIN AND CELLULAR TISSUE, COMMONLY KNOWN AS CARBUNCLES AND FURUNCLES.*

By ALFRED C. POST, M.D., LL.D.,
NEW YORK.

As there is considerable diversity of opinion among surgeons as to the local treatment of these troublesome, painful, and often dangerous affections, I have thought it expedient to present to the society my views on the subject, in the hope of eliciting discussion which may tend to harmonize our sentiments and improve our practice, and thus to alleviate and abbreviate the sufferings of our patients, and, in some instances, to rescue them from imminent danger to their lives. I do not propose to consider, on the present occasion, the constitutional treatment of these affections, not because I regard such treatment as unimportant, but because there is less diversity of opinion on the subject, and because it is more difficult to lay down any precise rules as to the best means of counteracting the various morbid conditions of the system which are influential in causing and maintaining the local manifestations of the disease which we are considering.

As to the local treatment of carbuncles and furuncles, the leading measures which are recommended by surgeons may be referred to four distinct classes:

I. *The sedative, or soothing treatment, consisting in the application of emollients, poultices, or fomentations to the inflamed parts.*—This method recommends itself to timid patients, because it inflicts no pain and excites no apprehension of suffering beyond that which, in its natural course, is occasioned by the disease. But the method appears to me to be faulty in these respects: that it does very little to relieve the suffering of the patient; that it does not abridge the duration of the disease; that it does not limit the destruction of the tissues which are involved; and that it does not diminish the danger of septic absorption, and contamination of the blood. Under this inefficient treatment the patient often suffers prolonged agony for days and weeks, his health is often seriously undermined, and a fatal result sometimes follows.

II. *The treatment by free incision through the whole breadth and thickness of the affected parts.*—This is the method which I have employed in nearly every case of the disease which has come under my care after the inflammatory symptoms have reached their height, and the process of disorganization has commenced. In such cases I have divided the inflamed parts throughout their whole extent by a crucial or stellate incision, and have interposed between the edges of the wounds lint smeared with a liniment composed of two parts of ung. resin and one part of ol. terebinth. The effect of this treatment has been invariably to arrest the progress of the disease, almost immediately to relieve the sufferings of the patient, to quiet the constitutional disturbance, to hasten the suppuration of the sloughs, and to promote healthy granulation. I have never known an instance in which the treatment by free incision and stimulating dressings was followed by an aggravation of the constitutional symptoms, or by a deteriorated condition of the local disease.

I will briefly allude to three or four cases illustrating the beneficial results of this mode of treatment.

A number of years since I was called to see a physician of this city, who had been suffering for a number of days from a large carbuncle on the back of his neck, which had been exceedingly painful, and which had almost entirely deprived him of sleep. He had been attended by one of our most eminent surgeons, who had treated him by constitutional remedies and by emollient applications. I advised free crucial incisions, and the surgeon in attendance assented to the change of treatment, and carried it out in a most thorough manner, extending his incisions at each point into healthy tissues. The pain was almost immediately relieved; the patient had a quiet sleep, followed by a marked improvement in his constitutional condition. The progress of the disease was at once arrested, the sloughs soon began to separate, and the reparative process went on without interruption until cicatrization was complete.

About the same time I was called to see another member of our profession, a hospital surgeon, who had suffered for several days from the very painful and dangerous disease known as facial carbuncle, and by some designated, improperly, as I think, by the name of malignant pustule. The disease involved one side of the upper lip. I made an incision through the vermilion border, dividing the inflamed parts throughout their whole extent. The incision was followed by immediate relief of pain, and the patient rapidly recovered.

In the summer of 1872 I was called to see an elderly gentleman, father-in-law of two well-known members of our profession, at his country seat on the banks of the Hudson, above the Highlands. He was suffering from a number of carbuncles on different parts of his body. One of them, on the side of the thorax, was of an irregular shape and of enormous size. The patient had been treated by appropriate constitutional remedies and by emollient applications, but the disease was extending and the general health was much impaired. I divided the largest carbuncle by deep stellate incisions, extending to its most remote boundaries, and the smaller carbuncles by crucial incisions. The usual stimulating dressings were applied. The progress of the disease was at once arrested. The sloughs were gradually thrown off, and granulation and cicatrization soon followed. I have a strong conviction that the disease would have been fatal if the incisions had not been made.

I will finish the recital of cases under this head by a brief account of an extremely complicated case, in which free incisions were followed by a marked improvement in the condition of the inflamed parts, but a fatal result from blood-poisoning and multiple abscesses occurred after the lapse of more than six weeks.

On December 11, 1880, I was called in consultation to see a gentleman about forty-five years of age, who was suffering from a very large carbuncle on the back of his neck. His general health was much impaired, and he was passing enormous quantities of urine, heavily loaded with sugar. I made a free crucial incision through the carbuncle, washed the incised parts freely with carbolic acid, 1 to 40, and applied the usual stimulating dressings. The

* Read before the New York Surgical Society, February 28, 1882.

sloughs gradually separated, and the base of the sore was filled with granulations, but, notwithstanding the use of appropriate constitutional remedies, the diabetes continued, abscesses formed in different parts of his body, one, of enormous size, involving the deep cellular layers of one of his thighs, and death from exhaustion took place near the end of January, 1881.

III.—*Treatment by the potential or actual cautery.*—Many surgeons have treated carbuncles by the application of caustic potassa to the centre of the inflamed part. The application is made thoroughly so as to destroy the skin to the extent of one-fourth to one-third of the part involved in the disease. It should also penetrate the diseased mass through nearly its entire thickness. This method was recommended by Dr. Physick in America, and by Mr. Higginbottom and Mr. Pritchard in England. Very favorable accounts are given of the results of this method. I have no personal experience of the treatment of carbuncle by caustic potassa, but I have made use of nitric acid in one instance with marked benefit. About sixteen years ago I had a painful inflammatory swelling on the outer part of my right leg; the swelling was circumscribed and indurated, and the integument involved was of a livid red color. The swelling had continued more than a week, daily increasing in circumference, in induration, and in painfulness, and it was beginning to interfere with locomotion. In this condition I applied to the surface a piece of bibulous paper, covering about half the extent of the inflamed surface, and moistened with fuming nitric acid. After the burning sensation occasioned by the application had subsided, a sensation of relief was afforded. The progress of the inflammation was arrested, the separation of the eschar was followed by a very slight amount of suppuration, and the sore rapidly healed. I felt satisfied that the application of the escharotic had saved me from prolonged suffering, and probably from a tedious confinement.

From repeated personal experience, I am inclined to regard the actual cautery as a very valuable abortive remedy in the treatment of carbuncle in its early stages, before actual disorganization has occurred to any considerable extent. In the spring of 1879, I had a circumscribed indurated inflammatory swelling over the right natis, continuing a number of days, gradually increasing in size until its circumference had equalled that of the butt end of a hen's egg, and it had become so painful as to be an occasion of great annoyance. While the parts were in this condition, I requested my friend Dr. Hinton to apply the actual cautery to the middle of the inflamed part. The cautery used for this purpose was Thorp's multiple cautery, presenting six points about the size of a small knitting-needle. This was heated to a red heat and plunged into the inflamed part so as extend through the skin into the subjacent tissue. There was a momentary acute pain; this rapidly subsided, and was followed by sensible relief of the pain which previously existed. The next day the swelling and hardness had diminished, and from that time there was progressive improvement until, within three or four weeks, the parts were restored to a sound condition. There was no destruction of the cellular tissue, and no proper suppuration, only a slight discharge of bloody serum. Within less than a week after the application of the cautery I rode in the cars to Philadelphia, and returned the next day, suffering very slight inconvenience from the journey. In the course of the spring and summer I had four other attacks similar in their leading features to the first, and they were all treated substantially in the same manner, only one application of the cautery having been made after each attack. Within about a week after the application following the second attack, I started on a journey of two thousand miles, and scarcely suffered any pain from the long-continued sitting posture. During none of these attacks did I remain in the house for a single day, or abstain from any of my ordinary avocations. I have a strong conviction, from what I have seen of similar attacks in patients whom I have attended, that the heroic treatment which I adopted saved me from protracted suffering and from the loss of much valuable time.

From my personal experience I have been so fully convinced of the benefit of this abortive mode of treatment that I have been anxious to make farther proof of its efficacy in appropriate cases. But I have not had the opportunity of testing the treatment in any well marked case of the early stage of carbuncle in a clearly defined form. But during the last summer, in my service at the Presbyterian Hospital, I had two cases of circumscribed indurated inflammation of an obstinate character, bearing some relation to carbuncle. And in both of these cases I applied the actual cautery with marked benefit. I will present these cases as they appear on the hospital records, as furnished by Dr. W. K. Simpson, who was House Surgeon at the time of their occurrence.

Case I.—L. Sweeny, aged fifteen years, admitted August 17, 1881. About two months before her admission, a painful swelling occurred at the upper part of the left thigh, with slight stiffness of the leg in walking, with swelling in the neck, and pain in the axilla. The swelling of the thigh had gradually increased until the time of her admission, and there had been at times cramps in the left leg.

At the time of her admission there was a circumscribed, hard red painful swelling of the left thigh in Scarpa's space, with enlargement of the corresponding inguinal glands. There were also enlarged glands in the right axilla.

Treatment.—Flaxseed poultices were directed to be applied to the inflammatory swelling, and sulphite of calcium was directed to be given internally in doses of one-fourth of a grain three times a day.

August 27th.—The swelling and induration continue, the pain has not been relieved, and no suppuration has occurred but at a minute point. I had the patient etherized, and applied a thermal cautery at a number of points, penetrating the skin and the indurated tissues beneath. Lint moistened with a saturated solution of bicarb. sodæ was directed to be applied over the surface.

August 28th.—The inflammatory symptoms are notably alleviated.

October 1st.—The sores made by the cautery have all healed, and the swelling, redness, and induration have been very much reduced. General health is rapidly improving.

November 1st.—There are scarcely any remains of induration in Scarpa's space. The inguinal glands are reduced in size, but are still somewhat enlarged. The patient walks without pain.

Discharged cured.

Case II.—John Dunn, aged twenty-eight, carpenter. Admitted August 30, 1881. Two years before his admission he had an inflammatory swelling of the right leg near the knee. The inflammation was of an obstinate character, and led to anchylosis of the joint.

At the time of his admission he had a circumscribed inflammatory swelling, with considerable induration, about six or seven centimetres in diameter, involving the skin and cellular tissue of inner side of the right thigh, more than a hand's breadth above the knee. It was quite painful and tender on pressure. It had existed for several months, and had resisted domestic treatment. There was no fluctuation, but there were two small ulcerated spots near the centre. I ordered absolute rest and hot poultices, to be renewed once in two hours, anodynes at night, to relieve pain and to secure sleep.

September 1st.—No relief having been afforded, I applied the thermal cautery at nine points, and directed the surface to be covered with lint moistened with a saturated solution of sodæ bicarb.

September 3d.—There is a slight purulent discharge from the cauterized points. The pain is relieved, and there is a decrease of the swelling.

September 6th.—The swelling has nearly subsided. There is a slight discharge from the sores, which are now dressed with carbolic acid 1 to 40

September 16th.—The swelling and induration have disappeared. The discharge has ceased. The patient is free from pain, and is able to walk without inconvenience.

Discharged cured.

Case III.—Hypodermic injection of dilute carbolic acid at a number of points around the circumference of the swelling, and directed toward its centre. This method of treatment was highly recommended by a Spanish surgeon, Dr. Muñoz. He used the following formula:

Carbolic acid	5 parts.
Alcohol	10 "
Distilled water	100 "

He used these injections daily, and reported that there was in each case immediate improvement, followed by a complete cure within a few days (see Medical Record, September 10, 1881, p. 308). I have made but a single trial of this mode of treatment, and that was in a case where the disease was too far advanced to afford a fair test of its efficacy. I give the following details of the case as furnished by the records of the Presbyterian Hospital:

Duncan Phillips, aged forty-one, admitted September 30, 1881. Ten days before his admission a swelling occurred on the back of his neck, which was painful and tender on pressure, and increasing rapidly in size. On admission a large carbuncle was found with several openings, which gave issue to pus and disintegrated tissue. I ordered hypodermic injections of carbolic acid, 1 to 40, into the base of the swelling. These injections gave pain, and were not repeated.

October 1st.—The patient came under the care of Dr. Shrady. He had at that time a temperature of 104° F. Poultices were applied, and the patient was directed to take sulph. quiniæ, gr. ij., every two hours, and four ounces of brandy during the day.

October 4th.—Patient feeble, discharge profuse.

October 10th.—Discharge still very profuse; quantity of quinine and stimulants increased.

October 15th.—Base of carbuncle 8 by 5 inches in diameter. This afternoon a severe arterial hemorrhage occurred, and the patient seemed to be sinking. Temperature fell to 97°. Ice was freely applied to the swelling, and hot applications to the body. Hypodermic injections of brandy were freely administered.

October 16th.—No return of hemorrhage. Patient has rallied from extreme depression. Carbuncle thoroughly carbolized, and dressings not disturbed.

October 18th.—General condition improving. Sore granulating. Same general treatment, with addition of beef peptone, ʒ ij., ter in die. Sore dressed with balsam of Peru covered by a layer of carbolized gauze.

December 1st.—General condition has steadily improved. The surface of the sore has been daily strapped, and is now reduced to a small, healthy ulcer.

Discharged cured.

The trial of hypodermic injections of carbolic acid in this case was so imperfect, and it was made at so advanced a stage of the disease, that no fair inference can be deduced from it as to the utility of the practice. I feel disposed to give the treatment a fair trial when a favorable opportunity shall present itself.

Carbolic acid has been used in a different way in the treatment of furuncles, as reported by C. B. Cleborne, M.D., Surgeon U. S. Navy, in the *American Journal of Medical Sciences*. He made a free incision as soon as fluctuation could be detected, pressed out the matter, and then swabbed the surface of the cavity with strong carbolic acid, after which he applied cold water dressings. This treatment was followed by a very rapid cure. (See Medical Record, January 15, 1869, p. 515.)

THE TREATMENT OF SCARLATINA.*

By DANIEL LEWIS, M.D.,
NEW YORK.

In The Medical Record of February 3, 1877, may be found a brief report of thirteen cases of scarlatina, treated by infusion of digitalis, in which I offered my reasons for recommending its general use. The present paper is based upon the histories of one hundred and fifty cases, which succeeded the thirteen previously reported, and they, being the product of two pretty severe epidemics which have visited this city during the past three years, are believed to be sufficient grounds for reliable deductions.

My attention was first called to this use of digitalis by Professor Bartholow's clinical lecture on "Physiological Antagonism as Applied to the Treatment of the Febrile State,"† and his theory was based upon the physiological action of the drug, concerning which nearly all writers are now agreed, viz.:

First.—Digitalis causes contraction of the arterioles, and consequent diminished blood-supply. Exudation is thereby checked or prevented.

Second.—The pulse is reduced in frequency, and the arterial blood-pressure raised.

Third.—Doses sufficiently large to slow the action of the heart will reduce temperature.

In the rapid pulse and high temperature of scarlatina, the low arterial tension and embarrassed secretion by the kidneys, are to be found all the indications for the use of this remedy, and Professor Bartholow declares "that, in a considerable experience in the treatment of scarlet fever, digitalis has been uniformly successful."

For present purposes we may divide scarlatina into two classes:

* Read before the Medical Society of the State of New York, February 8, 1882.

† American Clinical Lectures, vol. ii., No. 1.

First.—Malignant scarlet fever, in which the attack is so sudden and overwhelming that the patient dies before the effects of any drug can be obtained.

Second.—All cases usually classed as scarlatina simplex and scarlatina anginosa, in which the chief dangers are the pyrexia and consequent tissue degeneration, and the catarrh, or parenchymatous nephritis, by which elimination by the kidneys is diminished or arrested.

Digitalis meets both these indications by lessening the blood-supply to the tissues, by increasing the amount of water in the urine, and by its direct action on the Malpighian tufts.

While most writers admit this effect of the drug on the circulation of the kidneys, there is abundant evidence that the tendency to exudation in all *glandular tissue* is reduced to the minimum by its use.

The most reliable preparation for these cases is the infusion of the best English leaves. Dr. Bartholow says a reliable tincture may be used, but in cases where I have employed it the results were not satisfactory.

It does not appear to be as readily eliminated as the infusion, and unpleasant effects will often follow, and its administration be interfered with, while we may give the infusion for weeks, without depressing the circulation beyond the desired limits. I would suggest also that, in ordering the infusion, you send to a reliable pharmacist, unless you are willing to receive as a substitute a diluted fluid extract, or some equally uncertain preparation.

We should commence the administration of this remedy at the earliest possible stage of the disease, before those tissue changes occur which it is intended to prevent as well as cure.

To a child five years old, a teaspoonful every four hours is a safe and usually efficient dose. Should the pulse and temperature be unaffected by it, more can be given, but its effects carefully noted and the dose reduced whenever the desired effects are produced. I continue to give it two or three times a day until the end of the third week, unless the pulse becomes less frequent than it should be.

The following table contains pulse and temperature (axillary) of a few cases treated on this plan.

AGE.		DAYS.									
Years.		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th	10th
2½	Temp.	103½°	103°	104°	101½°	101½°	100°		99°		
	Pulse.	130	120	110	120						
5	Temp.	102°	102½°	102½°	100½°			100½°			
	Pulse.	140	136	136	120			70			
9	Temp.	103½°	105½°	104°	101½°	101°					
	Pulse.	130	140	130	110	110					
4	Temp.	105°	101½°	101½°	100½°	100°	99½°				
	Pulse*										
3	Temp.	105°	101½°	101½°	101½°	100½°	100°		99½°		
	Pulse*										
9	Temp.	103½°	105½°	104°	101½°	101°		100½°			
	Pulse.	130	140	130	110	110		90			
6	Temp.	103½°	104½°	106°	105½°	101½°	104½°	death			
	Pulse.	152									
11½	Temp.		104½°		101½°		100½°		100½°		
	Pulse.		140		120		120				
5	Temp.	105°	102°	102½°	102½°	100½°		100½°	100½°		99½°
	Pulse.	160	140	136	144	120		124	70		66

* Not recorded.

It will be observed from this table that in nearly all cases, a decided fall in pulse and temperature occurred within twenty-four hours after the digitalis treatment was commenced.

The *first day*, in the table, refers to the beginning of treatment, some of the patients having been sick one day before I was called to attend them. Such was the fact with the fatal case recorded, which was of a very malignant type, from the onset of the disease. On the fourth day, in the last history, it will be noticed there was a decided rise in pulse and temperature, and, although the patient was only five years old, a dessertspoonful of the infusion was given every four hours till the following morning, and with the most gratifying result.

In all cases the following prescription has been ordered for the throat:

℞.	Potass chlorat	4.0
	Tr. ferri chlorid	8.0
	Glycerinæ	30.0
	Aquæ	q. s. ad. 250.0

M. Sig.—Teaspoonful every half hour.

If exudation occur in the fauces the same mixture is also to be used with Davidson's Atomizer No. 55, every twenty minutes. A warm sponge-bath should be given more or less frequently according to the degree of fever, and inunctions of olive-oil over the entire body, at least twice daily. The oiling should be continued until desquamation is complete.

A milk diet should be strictly enforced, especially on account of its diuretic effect.

The results of this plan, in my one hundred and fifty cases, have been quite satisfactory. Seventeen proved fatal, only two of whom died of nephritis.

The mortality from scarlatina in New York City during the past year was nearly twenty-three per cent., while in my cases, you will notice, it was less than eleven per cent.

There were only two cases of otitis, both of which were mild and made a good recovery.

In the entire number there was no case of suppuration of cervical or other glands.

Dr. F. A. Thomas, of New York, informs me that he has employed the same treatment in fifty cases with excellent results.

In the epidemic of the present season I am pursuing the same plan, and have not the slightest hesitation in recommending it to the profession.

The Hygienic Value of the Electric Light.—The French scientific journal *La Nature* summarizes a communication from Dr. Javal, who believes that the electric light is absolutely without danger to the sight, in consequence of the amount of division which can now be obtained in it. *L'Union Médicale* also reminds its readers that similar researches of great interest from a scholastic point of view were published in that journal in May and July, 1881; including the researches of Dr. Cohn of Breslau, who found that the electric light increases sixfold, as compared with daylight, the perception of yellow, and doubles the perception of green and blue. The observations of Dr. Blasius and Dr. Hoppe, in a discussion which took place at a meeting of the Brunswick Society of Natural Sciences, are also noteworthy. These scientists have shown that illumination by the electric light deserved preference over all other methods in use, for the following reasons: 1. It does not pollute the air with deleterious gases or other unhealthy products. 2. It induces a greater visual unity than with daylight or gaslight. The conclusion adopted by the meeting was, that "the hygienic qualities of the electric light have not hitherto been appraised at their real value."—*British Medical Journal.*

CASES ILLUSTRATING TREATMENT OF CONSUMPTION BY A SYSTEMATIC GENERAL AND LOCAL ANTISEPTIC THERAPY.

By J. HILGARD TYNDALE, M.D.,
NEW YORK.

Every individual, strumous or otherwise, has his own standard of physiological well-being. Whenever the general condition and nutrition of a person is dragged below this physiological line, pulmonary consumption may be developed, either as a sequel to an acute pulmonary trouble, or be a sluggish process from the beginning, aggravated from time to time by fresh catarrhs of the pulmonary or gastric mucous membrane.

Actual destruction of lung-tissue takes place from the moment of the advent of bacteria, which usher in local putrefaction, to be in turn followed by general septicæmia.

We have, therefore, in a fully-developed case of consumption: first, a local putrefaction caused by the presence of bacteria and their rapid proliferation; second, a general septicæmia caused by absorption of septic material, on the one hand (aseptic fever of Volkmann), and general tuberculosis, so-called acute tuberculosis, on the other, whenever bacteria find in the lowered nutrition of the patient a favorable field for acclimatization and development.

It results from the above that the possibility of a cure lies in the resisting power of the patient as opposed to the destructive agencies of local putrefaction and general septicæmia.

Any treatment, therefore, which aims at success has to depend in large measure upon the assimilative powers of the patient, primarily upon his digestive capacity, and this, of course, is again dependent upon the state of his circulation and nervous system.

We may with considerable precision approximate the extent and dangers of the local process in the lung, and also of the general septicæmia, but the sum total of the patient's functional capacities can only be determined by actual trial

To my mind it has long been clear that what should primarily be done is to counteract by all means in our power local putrefaction and general septicæmia, and to depend upon the patient's functions to assert themselves, while we help to increase the resistance of the organism by combating septic influences. Keeping this general plan in mind, it would seem rational, therefore:

First.—To combat general septicæmia.

Second.—To combat local putrefaction.

Third.—To allow digestion and assimilation a chance to re-establish themselves; to make blood wherewith to baptize the starving tissues.

To this end the receptacle of all food, the stomach, should be left free from medicinal substances altogether, or, at least, until such time as we have succeeded in limiting the disease, and see a chance to save a goodly portion of the affected lung. The loss of an extensive section of lung is not inconsistent with life and very reasonable health.

It is upon these broad principles that I have based my "systematic general and local antiseptic treatment of pulmonary consumption." In this method reliance is not placed upon one feature, such as inhalation, nor upon one route of administration of remedies, nor upon any one antiseptic remedy. I have allowed the system to evolve itself out of a sound basis, and endeavored to improve and perfect it by the experience which came from close observation of cases treated. The system itself consists of seven counts, each one the link of a perfect chain, not one of which can stand alone. These "counts" will be published hereafter.

If now a few of my cases are published, with the results thus far attained, it is my wish not to be considered premature. The sole reason why it is done at this time is to draw the attention of the profession to the system, and to ask that it be given a fair trial, in private as well as in hospital practice, for which purpose the details are at disposal.

Let me add, that any system or method intended to yield better results than any former line of treatment must be conducted with extreme care. It is essential that there be an absolute and complete control of all details. The two great factors in the treatment of such a chronic disorder as pulmonary consumption are *individualization and strict attention to detail.*

Case I.—H. B——, aged thirty-two; tanner by trade; no hereditary vulnerability. Directed to me by Dr. Pinner. Limited cavity of right apex; consolidation surrounding it. Infiltration of left apex. Great weakness; loss of appetite. Diagnosis: Catarrho-fibroid phthisis, with bronchiectatic cavity. Treatment: Hypodermic injection of three per cent. carbolic acid solution, for general septicæmia; intrapulmonary injections of carbolic acid solution (first two and then three per cent., ℥ 30); no medicine by stomach. First intrapulmonary injection called forth a slight pleurisy, readily reduced. From October 31, 1881, to February 7th of this year, seventeen intrapulmonary injections given. Begins now with continuous inhalation of antiseptics (pure carbolic acid and eucalyptol alternated). Result thus far: Constant gain in strength and weight; digestion normal; no dulness anywhere; vesicular murmur in left lung; cavity of right apex shrinking with consolidation supplanted by vesicular murmur.

Case II.—Anna M——, aged twenty-three; mother died of consumption; single; marked emaciation; slight fever; night-sweats; muco-purulent expectoration. Diagnosis: Chronic catarrh of left lung from apex to third rib; scattered râles over right apex. Treatment: General antisepsis; hypodermic injection of three per cent. carbolic acid. Local: Inhalation of pure carbolic acid through oro-nasal respirator; iron and nux vomica internally; occasional counter-irritation. Treatment commenced October 18, 1881. Inhaled from three to six hours per day. Present condition: General condition established on a firm basis; right lung clear; no dulness over left, and sparse, dry crackles, with scarcely any expectoration. Able to resume work as chambermaid.

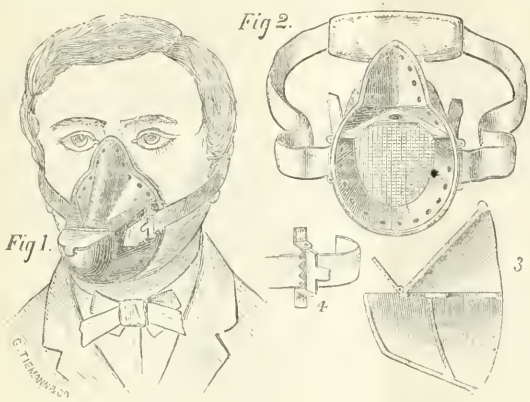
Case III.—Elizabeth H——, aged thirty-eight; married; hereditary vulnerability; greatly emaciated; digestive functions sluggish; sick for ten months, during which time two hemorrhages. Temperature, 104° F., evenings. Diagnosis: Medium-sized cavity of right apex; moist râles over whole of right lung; superficial catarrh of left apex. Treatment: General antisepsis; hypodermic injection of carbolic acid (three and one-half per cent.), and occasional quinine doses. Locally: Intrapulmonary injections of three per cent. carbolic acid; continuous inhalation (six to eight hours a day) of pure carbolic acid, followed by eucalyptol and creasote with oil of turpentine; lung gymnastics to strengthen heart and diaphragm. Treatment commenced October 22, 1881. Present condition: Fever absent for past five weeks;

slow but certain progress in general condition; left lung clear; respiration somewhat exaggerated; shrinking of cavity of right side, and partial return of respiratory murmur; expectoration mucous, with occasional globular pus. Patient in bed when first treated; now able to take short walks.

Case IV.—Frederick G——, aged forty-four; married; ticket agent on Elevated Road. Sick three years. Diagnosis: Slowly progressive catarrho-fibroid phthisis, involving whole of left lung. Very excitable nature. Rapid heart's action. Treatment, since November 16, 1881: Local antisepsis; eight intrapulmonary injections up to date (February 7th), same as others; inhalation at night, as he is busy in daytime; lung gymnastics. Improvement to date: Normal action of heart; no weakness, which kept him from work at first; left lung clearing up, after two attacks of subacute catarrh following injections. In this case one of the injections caused emphysema of the subcutaneous connective tissue over left lung, extending up the neck, which disappeared in five days.

Case V.—Adam L——, aged forty-five years; jeweller; married. Diagnosis: Fibroid phthisis of both lungs, largely dependent upon long-continued malnutrition and superficial breathing; digestive functions much retarded; frequent asthmatic attacks. First seen November 15, 1881. Treatment: Inhalation of pure carbolic acid from four to five hours a day; dry cupping every fifth day. Systematic lung gymnastics. Improvement up to date: Digestive functions normal; no asthma; can walk two miles, as against two blocks formerly; râles over both lungs dryer and more sparse, vesicular murmur heard above them; had discontinued work when first seen, now works all day.

Case VI.—Maggie McB——, aged twenty-three years; single; saleslady; no hereditary taint. General anæmia; uncertain appetite; kept awake nights by coughing. Diagnosis (October 11, 1881): Catarrhal phthisis of left lung; râles bend to fourth rib; no cavity. Great tendency to disturbances of gastric and pulmonary mucous membranes. Treatment: General condition: Iron and occasional hypodermic injection of two per cent. carbolic acid solution. Local: Continuous inhalation of ethereal tinct. iodine, followed by oil of turpentine; lung gymnastics and occasional dry cupping. Resulted in perfect cure after two months' treatment.



For hypodermic medication I use, of course, a needle of the usual size. Of three per cent. solution of carbolic acid I have injected from three to six syringes full a day. At present I am using carbonate of quinine and chloride of zinc.

The needle for "intrapulmonary injection" is two and one-half inches (6¼ etm.) in length, a little stronger and with a somewhat larger bore than the ordinary hypodermic needle.

My "oro-nasal antiseptic respirator," illustrated by the accompanying woodcut, is manufactured by Tiemann & Co., of this city. Fig. 1 shows the respirator as applied to the nose and mouth. Fig. 2 presents an inside view of the sieve separating the facial organs from a cup with a readily closing lid, into which cup the antiseptic remedy is introduced upon fine sponge, lint, or absorbent cotton. Fig. 3 is a vertical section of the whole respirator. Fig. 4 shows the buckle attached to either side.

The oro-nasal respirator of the pattern here shown is made of thin sheet-tin, japanned flesh-color or black. We are now perfecting the respirator by using thin brass, thus making it lighter and of a semi-globular shape.

THE ANATOMY AND HISTOLOGY OF CYST OF THE PANCREAS.*

By HENRY J. GARRIGUES, A.M. M.D,
NEW YORK.

At the meeting of this society which was held December 14, 1881, Dr. Bozeman presented a cyst he had removed from the pancreas of a living woman, gave the clinical history of the case, and described the operation.

Pancreas cysts are so rare that only quite few are on record, and nowhere have I been able to find a full anatomical description of one, nor has there ever been made a microscopical examination of the elements of the cyst and the fluid, so far as I know. It seems, therefore, desirable that this opportunity be seized to give as full particulars about this rare case as possible, and no place seems fitter for the record than the Transactions of the Pathological Society.

The cyst with fluid weighed twenty and one-half pounds; the fluid measured two and one-half gallons. It lay close up to the anterior abdominal wall, and was cut off from the tail of the pancreas. It was a monocyst in the surgical sense of the word, but on several places were seen secondary cysts as large as a small hen's egg. The outer surface was of a light bluish gray color; the inside was dark red, and in some places greenish brown. Large partitions, with large holes, were seen in the interior, as remnants of walls separating different cysts.

On the inner surface was found an opening as large as a dollar, leading into a canal six inches long, which rapidly diminished in calibre, the first half ad-

* Read before the New York Pathological Society.

mitting a finger, the second half a probe, and ended blind in the wall. I have once met with a similar canal in an ovarian cyst, which I demonstrated before this society a year ago.

The wall of the main cyst was mostly thin, measuring only two or three millimetres in thickness. The outer surface was smooth and hard, and it was only with difficulty that some flat peritoneal endothelial cells were scraped off. The inner surface, on the contrary, was velvety, and, by scraping, whole pieces of epithelium were obtained, the single cells of which were very long, narrow, and columnar. I measured a couple of them, and found them thirty-two micromillimetres long and eight micromillimetres wide. The upper end was rounded; the lower formed a thin root, near which was seen a nucleus. In the upper part were seen some fine fat granules.

Scrapings from the beginning of the above-mentioned canal showed only pigmented Bennett's corpuscles, *i.e.*, changed epithelial cells (see Garrigues: "Diagnosis of Ovarian Cysts by Means of the Contents," in *American Journal of Obstetrics*, January, 1882, p. 18), as we find them so commonly in ovarian cysts, some red blood-corpuscles, and fine granules.

A snip removed from the inner surface of a secondary cyst showed a beautiful regular polygonal epithelium, exactly like an ovarian cyst.

I hardened a piece of the cyst with a secondary cyst in a one-fourth per cent. solution of chromic acid, which, later, was replaced by alcohol, and obtained good cuts, of which one lies under the microscope before us.

The wall is composed of fibrous connective tissue, which, in the outermost and innermost part, contains many round cells, while the intermediate part contains very few of them; especially near the epithelium the tissue is choke full of them.

The inner surface shows the formation of secondary cysts, exactly as we find it in ovarian cysts. For the convenience of the members, I have made rough diagrams of different places of the same cut, and by them it will be seen how at first there are only broad and shallow depressions, separated by low and broad hills; next the bays become long, narrow creeks, separated by more pointed promontories; finally the outer opening is blocked up by epithelial cells, and the connective tissue prolongations grow together. Thus, a closed pouch lined with epithelium and surrounded with connective tissue is formed, and the same process is repeated over it.

The single cells of which the epithelium is composed are goblet-shaped, with a nucleus at the lower end.

The *fluid* found in the main cyst was yellowish gray, viscid, had a specific gravity of 1020, and acid reaction. No spontaneous coagulation took place in it, but by boiling it precipitated much solid matter. The microscope revealed—1st, innumerable bodies, which looked as if they were composed of a few short threads, and which, by examining a secondary cyst, were found to be the remnants of the bodies of the epithelial cells; 2d, innumerable very small nuclei, with dark granules; 3d, pigmented large Bennett's corpuscles; 4th, epithelial flakes in a semi-dissolved condition, including similar bodies.

From a secondary cyst was first taken fluid which was like raw albumen, but from the bottom came a thick brownish gray fluid, which was full of columnar epithelial cells and pigmented Bennett's corpuscles, exactly as seen in many secondary cysts of ovarian cysts.

The finid from the main cyst looked macroscopically entirely like the fluid from the most common kind of myxoid ovarian cysts, but under the microscope it differed from it by the presence of the thready bodies and the uniform size of the nuclei. Besides that, it differed from ovarian fluid by its acid reaction. This reaction is very puzzling, for the pancreas juice is alkaline. I can only explain it by an endosmosis from the stomach. How near the relations were between the latter organ and the tumor appears from the clinical fact that on the fifteenth day after the operation the patient vomited six or eight ounces of pus.

I have searched some of the chief works on morbid anatomy, in order to find parallel cases. Rokitansky (Sydenham Society, London, 1849, vol. ii., p. 179) mentions very briefly serous cysts of the pancreas, which, he says, must be distinguished from dilatations of the ducts and their terminations, which put on a similar appearance. It is evident that he did not know of any large cyst in this locality. Cruveilhier does not mention pancreas cysts at all in his atlas. Virchow, in his voluminous special work on tumors ("Pathologie des Tumeurs, traduit par Aronsohn," Paris, 1867, vol. i., p. 273, fig. 48), represents a case of "very considerable" dilatation, partly cystiform, of the pancreatic duct, due to obliteration of the orifice by a tumor in the duodenum, but as no dimensions are given it is more than doubtful if really a large cystic tumor was formed. Lebert ("Traité d'Anatomie Pathologique," Paris, 1857, vol. i., p. 238, etc.) is the only author in whom I have found detailed descriptions of pancreatic cysts. He mentions (p. 279) a specimen found in St. Bartholomew's Museum in London, in which there was a cyst measuring more than one inch in diameter, and situated on the end of the Virsungian duct, which was obliterated by calcareous matter. Further, he mentions the case of Gould, of Boston, in which at an autopsy the whole pancreas was found changed to a cyst containing from three hundred and fifty to four hundred grammes of a sero-sanguinolent fluid. Lebert speaks further with doubt of Störck's case, who found the pancreas weighing thirteen pounds and changed into a sac filled with blood. Finally, he mentions a specimen found in the museum of Strasbourg, in which a cyst as large as the head of a four years' child occupies the body and the tail of the pancreas, while the head of the gland seems to have remained healthy. It has fibrous, whitv, very resistant walls, three millimetres thick. This latter specimen seems to have much in common with the one described above. Since Dr. Bozeman's patient was dismissed cured, it is impossible to say anything about the condition of the non-cystic part of the pancreas.

Since it is the first time a description of the histological structure of a pancreas cyst is given, we have no others to compare it with, no standard to measure it with. We find in our case a striking likeness of the secondary cyst formation with that of ovarian cysts. I do not see any difficulty in explaining it. The Virsungian duct being lined with columnar epithelium, and an obstruction taking place somewhere in its conrse, a retention cyst is formed, and the proliferation which has just been described begins on the inside.

But, if in the course of time, when a larger number of well-observed cases are at hand, it should be found that this kind of cyst-formation does not belong to the pancreas, our specimen may be explained in another way. It is possible that it is not formed

of elements belonging to the pancreas itself. This whole enormous cyst which now had grown together with the pancreas, may originally have formed part of the *germinal epithelium* described by Waldeyer ("Eierstock und Ei," p. 117, Leipzig, 1870, etc.), which is the first beginning of the Wolffian body and Müller's duct, in other words, of the whole uro-genital apparatus. A few of the columnar cells of which it is composed may not have been used for building up the organs we have just mentioned, and may have been surrounded by connective tissue and formed a small cyst, which in the course of time attained so large dimensions.

Progress of Medical Science.

Inoculation of Animals with Venereal Matters.—Dr. Rebatel, of Lyons, has recently been making a series of experiments on animals with a view to test anew the question whether or not they are susceptible to any of the several venereal diseases of mankind. These experiments have either been performed under his immediate supervision or with the assistance of his colleagues, and have been controlled and varied in such a way as to leave no doubt in his mind that there is but one way in which the question is to be answered. He first took some pus from a patient with gonorrhœa, and inoculated it upon the mucous membranes of the eye, the glans, and of the urethra, even injecting some of the virus into the urethral canal. His subjects were dogs, rabbits, and guinea-pigs. No trace of consecutive inflammation was ever seen. Another series of experiments was performed with the matter from a soft chancre; the results were negative, as in the former case. Finally he took two hard chancres that had been removed in the operation of circumcision; then, making slits in the inguinal folds of a bitch, he inserted them, sewing up the openings. No symptoms of infection followed. Into the jugular vein of a dog he next injected one hundred and fifty grammes of defibrinated blood, taken from a patient in the full tide of secondary syphilis. No ill symptoms followed, but in due course of time these two animals contributed mutually to the production of a litter of puppies, twelve in number. Nor did these young manifest any congenital disease or, in fact, anything but the most exuberant health.—*Lyon Médical*, January 8, 1882.

Sudden Death during Forced Depression of the Tongue.—The following case was reported to the *Société de Médecine et de Chirurgie de Bordeaux* by Dr. Moure: A woman, sixty years of age, complaining of buzzing in the ears and commencing deafness, presented herself for treatment. The physician surmised a catarrhal difficulty and obstruction in the Eustachian tubes. Wishing to specially examine the pharynx, he told the patient to open her mouth, and as the tongue interfered with his exploration he made use of the spatula. He had just commenced pressure upon the tongue when the patient was taken with a suffocative attack. Thinking there was spasm of the glottis, Dr. Moure began artificial respiration. Asphyxia being imminent, however, tracheotomy was performed, but without relief. Blood poured out by the canula and mouth, and the patient died. The reporter was of opinion that the forced depression of the tongue was merely the occasion for determining a spasm of the glottis, which would have been insufficient to produce death in a sound and vigorous person; but in this particular instance revived an old cardiac affection, which either set up an acute pulmonary congestion or pulmonary apoplexy.—*Moniteur de la Policlinique*, January 8, 1882.

Successful Transplantation of Humerus to Replace a Necrosed Shaft.—The following case, reported by Dr. MacEwen, of Glasgow, instances a novel procedure that may prove of some practical utility to surgeons: William Connell, a boy three years of age, entered the Royal Infirmary in Glasgow, in a state of great emaciation, resulting from necrosis of the right humerus. This bone was so extensively necrotic that it was, in great part, removed (by Liston's forceps), the epiphyses only remaining behind. There was little evidence of periosteum, fungous granulations almost wholly supplying its place. The wound subsequently healed, the patient's health was greatly improved, but the periosteum had only developed a small pointed and delicate bit of bone, adherent to the upper extremity, which, in its totality, only measured about one and three-fourths inches in length. As the condition was not materially altered during the fifteen months following the operation, it was decided to transplant the bone, and accordingly a section was taken from an incurved tibia, cut up into pieces, and placed in conjunction with the upper extremity of the humerus. An attachment subsequently took place. Pleased with this result, a second graft was made, in this instance the bone being cut up into somewhat larger pieces than at first, the size varying from one-sixteenth inch in diameter to one-fourth inch; of these about one-third, and the larger ones did not adhere, but escaped by the open wound. As a result of this operation, the bone now measured four inches in length. The third graft was attached to the lower extremity. The pieces of bone in this instance were made still smaller than in the other experiments. The result was a success. It now remained to unite the confronting extremities of the grafts, which was successfully done. The whole length of the bone was now six inches, only half an inch less in length than its fellow on the opposite side. All the movements of the arm are now complete. MacEwen adds, in his conclusions, that each little fragment that is transplanted should contain in it all the elements of the bone, and the antiseptic method should be adopted to ensure success.—*Revue de Chirurgie*, January 10, 1882.

Hepatic Affections in their Relations to Diabetes, and New Diagnostic Symptoms of the Latter.—Congestion of the liver, according to M. Lecorché, is a frequent, if not a constant phenomenon in diabetes, and is due to the increased activity of the organ. Hypertrophic cirrhosis of the liver he has often observed in diabetes, so often that he thinks it can hardly be a coincidence merely, and may be traced to the enormous amount of fluid which diabetic patients consume. It has but a slight connection with the congestion just mentioned. At the meeting of the Academie de Medicine, at which the above statements were made, M. Magitot gave some new symptoms, which he regards as characteristic of this disease. According to him, an examination of the mouth will invariably enable the observer to detect diabetes when present. It will be seen that there is a disease of the alveolar border, called alveolar periostitis, which exists dur-

ing the whole life-history of the affection. At first the teeth deviate from their proper line of insertion, then they become loosened, and at an advanced period fall out. The fatal termination may be inaugurated by absorption of the alveola, or gangrene of the gum.—*Moniteur de la Policlinique*, January 1, 1882.

Paracentesis of the Bladder through the Perineum and Prostate.—Mr. Reginald Harrison, after justly criticising the various methods of relieving a distended bladder in old men with enlarged prostate, describes a means of relief practised by himself upon a man eighty-four years of age. He passed a trocar with its canula through the perineum and gland into the bladder so as to reach the point where this viscus is uncovered by peritoneum, guiding the instrument by the left forefinger in the rectum. He then removed the trocar and secured the canula, *in situ*, by means of tapes.

The advantages he claims are: More complete drainage, and, therefore, less danger from pyelitis, cystitis, etc., than where a catheter is retained in the urethra; a short "*low level*" urethra more adapted to the new relation of prostate and bladder; a continuous discharge of urine at night, with easy command over the same during the day, the flow being regulated by a spring clamp fitted to a bit of rubber-tubing, which latter is connected with the canula. —*British Medical Journal*, December 24, 1881.

Monocystic Tumor Containing Limpid Fluid, Probably of Ovarian Origin.—At a meeting of the Philadelphia Obstetrical Society, held January 5, 1882, Dr. B. F. Baer presented a tumor removed by Dr. Wm. Goodell from a woman forty years old. Its history revealed sudden growth, with rapid emaciation of the patient. Laparotomy disclosed a monocyst to the left of the uterus, with the Fallopian tube stretched across its surface. It contained limpid fluid. The left ovary could not be found after a careful search, either in its normal position or in the cyst wall. The question of ovarian origin is an interesting one, as certain writers deny that ovarian cysts are ever unilocular or ever contain limpid fluid. If of parovarian origin no special interest exists, except that there was an absence of the ovary, and the tumor grew with unusual rapidity. At the same meeting Dr. Baer related a case where undoubted monocysts of both ovaries were removed by Dr. Goodell from a woman twenty-two years old, though the latter was inclined to believe that this tumor had its origin from the broad ligament, in which opinion he was sustained by Dr. Drysdale, who regarded the presence of the limpid fluid as proof positive that such was its origin.

Diphtheria.—Dr. Franklin Staples, of Winona, Minn., after an extended correspondence with physicians in most of the counties of his State, has published a report on diphtheria, in which he classes the disease as contagious and infectious, and demonstrates that it is on the increase, a fact due, in his opinion, to failure on the part of physicians in recognizing its self-propagating properties; to want of systematic nursing of patients suffering from the disease; to incomplete disinfection of premises attacked; and last but not least, to the frequent intercourse of convalescents with healthy persons. He maintains that strict regulations, rigidly enforced, are the only means adequate to cut short its career, and since individual power is unable to cope with it, urges that every city and town should devise efficient sanitary laws, and let them be enforced by intelligent medical officers, who shall also make it their duty to instruct the people in sanitary rules. To guard against contamination, he believes that filth, whether from dirty rooms, soiled clothing, defective drains and cesspools, ill-ventilated rooms, poisonous inodorous gases, etc., should be regarded as conditions which invite the disease: that the apartments set apart for the patient should be divested of all furniture, carpets, curtains, and fabrics of any kind not absolutely required; that discharges from the nose, mouth, and bowels, should be carefully collected and destroyed, and that all personal clothing, bed-linen, etc., should be thoroughly disinfected before being sent to the general wash. In case of death, all clothing and unimportant articles should be burnt, the body should be immediately disinfected, and put into its coffin, which should be kept permanently closed. There should be no public funeral. He prefers disinfection by chlorine gas, which is to be set free in the room. Ventilation for a number of hours should then be insisted upon. Precautions falling short of these Dr. Staples considers to be useless in preventing the spread of the infection.—*Report on Diphtheria to the Minnesota Board of Health*, 1881.

Is Salicylic Acid a Specific for Rheumatism?—Dr. Lewis Shafter, Physician to the Devon and Exeter Hospitals, commenting upon the value of salicylic acid in the treatment of rheumatism, is unwilling to admit its specific properties. But Dr. Wm. Strange, of the Worcester General Infirmary, writing in the same issue of the journal, after an extended experience with this drug, is confident in his statements that in the same sense as quinine acts as a specific in malaria, or mercury and iodide of potash in syphilis, so salicylic acid, but more especially its compound, the salicylate of soda, acts as a specific in acute articular rheumatism, by neutralizing the poisonous elements of the blood.—*British Medical Journal*, December 24, 1881.

Suppurative Parotitis in Puerperal Fever.—The interest which recent events have attached to suppurative parotitis has induced Dr. W. H. Taylor, of the Cincinnati Hospital, to report the following case: L. S——, aged twenty-one, primipara, had a normal delivery on April 23, 1881, but on the third day following, violent headache, vomiting, and abdominal pain set in, while the lochial discharges became offensive and scanty. Pulse, 104; temperature, 103.8°. Ten days later, the temperature had risen to 105.2°. On the thirteenth day a painful, red and indurated swelling appeared below and behind the left ear. On the nineteenth a purulent discharge issued from the left auditory canal, and suppuration occurred on the middle finger of the right hand. After this date the patient improved, and on the thirty-fifth day after delivery was discharged cured. Trousseau and Niemeyer are cited to show how formidable the complication is. In a clinic by Professor Da Costa (*Boston Medical and Surgical Journal*, December 15th), a case of typhus was shown in which there was at first tumefaction of the parotid, a symptom he also thought implied considerable severity in the case. However, under the treatment by internal application of ice it gradually became smaller, and when suppuration set in was very limited. Dr. Da Costa regarded it as a very unusual and grave symptom, indicating a septicæmic or pyæmic form of typhus fever. He had met it more frequently in typhoid and typho-malarial fevers.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, March 18, 1882.

STATE EXAMINATIONS AND THE NEW MEDICAL BILL.

THE Committee on Legislation of the State Medical Society have, in accordance with instructions given at the recent meeting of that organization, presented to the State Legislature an amended act relating to State examinations, and a new bill for regulating the practice of medicine. The full texts of the proposed laws we give in another place.

The amendment offered is one to the original act passed May 16, 1872, relating to the examination of candidates for the degree of doctor of medicine. That act provided for the appointment by the regents of the University of the State of New York of one or more boards of examiners in medicine, each consisting of not less than seven members, whose duty it was to test the qualifications of all candidates appearing before them for a license to practise medicine. Such examinations are specifically named, and embrace those in all the fundamental branches of medicine, viz.: anatomy, physiology, materia medica, pathology, histology, clinical medicine, chemistry, surgery, midwifery, and "in therapeutics, according to each of the systems of practice represented by the several medical societies of this State."

The latter clause was altered by an amendment passed July 26, 1881 (Chap. 679, Laws of 1881), providing for an examination in "therapeutics of that one of the systems of practice represented in the several incorporated State Medical Societies of this State which the candidate may elect."

The present amendment presented by the Legislative Committee of the State Society, and endorsed by the said society, is to the effect that all such examinations, instead of being voluntary, as heretofore, shall be compulsory, and the reception of a certificate or diploma from one or other of these boards shall be necessary for a license to practise medicine on the part of all future graduates from our medical colleges, or others who may desire to join the profession in this State. In other words, the first practical step is being taken toward establishing independent medical examinations by the State. This is by no means a new idea. Substantially, the same plan of procedure has been advocated by many leading medical men, not only in this but in other States; and nearly fifteen years ago THE MEDICAL RECORD earnestly advocated it as one of the most practical means of advancing the standard of medical education and of guaranteeing in all cases proper qualifications for practising medicine. A careful and impartial study of the subject from that time to the present has not changed our views; in fact, we are more than ever in favor of such a measure. It appears to us to be the best and most direct way of settling many vexed questions associated with the possible graduation of incompetent persons, even from some of our best schools.

As will be seen, there is no intention of depriving the medical colleges of their rights as institutions of learning, or of their privileges of granting degrees, but simply of the power of licensing their graduates to practise medicine. This was formerly the case in this State, and, by the act of 1827, the colleges did not carry with them the licensing power. It is hardly to be supposed that the leading schools will object to this restriction when the principle upon which it is founded is so obviously in favor of fixing the requisite qualifications on the part of all candidates for a license. These schools have everything to gain by such an arrangement, as the results of their teaching will be strongly contrasted with that of the lower grade colleges by the large majority of their graduates who must necessarily pass these State examinations.

If any active opposition is developed against the amendment it will certainly come from such institutions as feel that their standards of qualifications for graduation are not what they should be. And there is no disguising the fact that the aim of compulsory State examinations is essentially in the direction of proving how far below the standard are many of the chartered medical schools who are now qualified by law to confer licences upon their graduates. It must be recollected in this connection that the graduates from the law schools of this State, although duly receiving their degrees, are subsequently subjected to additional examinations before being admitted to practise at the bar. It has been proven that the graduates from the better-class schools are almost always successful before these boards of examiners. And as far as candidates for medical licenses are concerned, it does not appear that any arguments can be offered against the principle of such examination, except such ones as weigh in the direction of supposed incompetency of candidates.

The bill for regulating the practice of medicine is the result of much study, based upon the acknowledged defects in the law of 1880, and is accordingly worded with great care. Proper medical registration is the point upon which all its main provisions revolve. Every physician by its provisions is expected to be registered in the County Clerk's Office. None but qualified practitioners can be so registered. All others who are not so registered and attempt to practise medicine are declared to be guilty of misdemeanor, while those who register falsely are guilty of felony. The defects in the bill of 1880 are now apparently removed, making it no longer possible for the quack and otherwise unqualified practitioner to escape conviction and punishment for perjury. As is well known, the law of 1880 was proven to be defective, in that the penalty for perjury was not sufficiently severe. Now, however, the true intent of the clause is made sufficiently explicit. Nor does it seem possible that any unqualified person or quack can dodge the responsibility of being a doctor so long as he in any manner prescribes for the sick. The definition of the term doctor of medicine, or prescriber for the sick, is one which apparently covers every possible contingency, and leaves no loophole for the escape of wilful offenders.

The proposed amendment and the new medical bill both complement each other and with a few verbal changes can be made perfectly consistent with the idea of proper regulation for the practice of medicine. Both amendment and medical bill will doubtless receive the hearty endorsement of the profession of the State.

THE CHRONIC CARBOLIC ACID POISONING OF SURGEONS.

Professor Czerny, of Heidelberg, in discussing the relative value and danger of carbolic acid and iodoform makes some interesting comments on the chronic carbolic acid poisoning of surgeons.§

The amount of carbolic acid taken into the system by the surgeon during a single operation may be, as he shows, very great. The following surprising statement is made by Falkson. In the twenty-four hours succeeding a two and a half hour operation in which a two per cent. carbolic acid spray was used, he excreted by the urine 2.0655 grammes of carbolic acid. Now the maximal dose of carbolic acid is two or three minims, which would be fourteen times less than the amount thus thrown off by the kidneys alone. It is well-known that the drug is excreted by the skin and lungs also.

Professor Czerny says that the history of the surgeon's sufferings from chronic carbolic acid poisoning has yet to be written. He gives, however, some of the symptomatology. The "carbolic marasmus," as he calls it, begins with slight headaches, bronchial irritation, languor, and diminished appetite. When the poisoning is of long standing or intense, the cough becomes permanent, there are heavy dragging pains in the region of the kidneys, the legs feel heavy, there is a sluggish circulation in the abdomen, nausea, especially in the morning; cutaneous pruritus, and finally insomnia, which latter may be due in part to the formication and other disagreeable sensations in the hands. The blood becomes impoverished and the face assumes an anæmic appearance.

The symptoms are, says our writer, such as would come under the head of what is now described as neurasthenia. But it is a neurasthenia which will disappear after vigorous walking in the open air and a few days absence' from the clinic.

The symptoms no doubt vary with the idiosyncrasy of the individual, and it would be a matter of much interest if more complete data regarding this form of poisoning were accessible.

Professor Czerny has never seen any structural change result from the constant absorption of carbolic acid.

His conclusion is, however, that phenol is not a safe thing for the surgeon to use constantly, especially according to the method of Lister.

In comparing it with iodoform it may be said that the iodoform is safer for the surgeon, the phenol safer for the patient. There is, however, no great danger to the patient from either agent if it be judiciously used.

MALARIA AND RICKETS.

The attempts to show a relationship between malaria and the various diseases of the body have in late years been very active. Indeed, there are few diseases now, from leprosy to diabetes, in which the particulate poison of the swamps has not been thought to play more or less of a part. It is indeed suggested that if the Principle of Evil had only chosen to embody himself in the *bacillus malariæ* he would have found an immense pleasure in the exercise of his unblessed activities.

This is only preliminary, however, to some account of another function that has recently been attributed to malaria, viz., that of being the cause of rickets. Oppenheimer, of Heidelberg, in the *Archiv für klinische Medicine*, has ventured to defend this view, and he presents arguments which are certainly ingenious and interesting.

The writer in question first attacks the present views of the cause of rickets. He asserts, as others have done, that a famine diet and bad hygiene do not by any means always bring on this disease, and that too much attention has been paid to the osseous lesions, which are after all only secondary. He states that, before the bones are affected, the patients show characteristic symptoms. Such, for example, is a certain form of diarrhœa which appears on fixed days, generally in the morning, and with a periodicity generally like that of tertian ague. At

the same time the abdomen becomes tumefied, and the spleen invariably enlarges. These symptoms may be absent, and the disease announce itself by other crises, also periodical. Thus the child at night has attacks in which he cries for hours, the spleen is enlarged, the temperature rises but falls again toward morning with profuse sweating of the head.

Professor Oppenheimer contends that when rickets has reached the stage of marasmus, the appearance of the patient resembles closely that of an adult with malarial marasmus. And he puts side by side the descriptions of the two conditions as portrayed by classic authors.

As regards the osseous lesions found in rickets alone, our author reasons in the following ingenious manner: The medulla of bones is undoubtedly affected in malarial poisoning of adults, as has been shown by the investigations of Arnstein, Browicz, Heuck, and others. This medulla has an equally undeniable function in the manufacture of red blood-corpuscles, and perhaps in metabolism. But such function is comparatively inactive in the adult, while it is very active in infancy and early childhood. A poison, therefore, which might have little effect upon an adult medulla would be very injurious to the bones of infants.

A final argument is drawn from the geographical distributian of rachitis. It is shown by Hirsch that this disease is extremely rare in countries where paludal fevers are unknown, as upon the elevated plateaus of Europe, and in the north of Scandinavia.

THE DEATH OF A PRIZE-FIGHTER.

A short time ago a notice was published that John J. Dwyer, the prize-fighter and ex-heavy-weight champion of America, died of consumption at St. Peter's Hospital, Brooklyn. He was only thirty-six years old. For twelve years he had been a prominent member of the ring, and less than three years ago he easily won the championship of America. He possessed naturally a powerful physique, which he had assiduously cultivated from boyhood. Since leaving the ring, in 1879, he led a temperate life as a clerk.

We do not give the above items to commemorate the career of Mr. Dwyer, but to extract the lesson which may be found in it.

The cultivation of a powerful muscular development does not of itself ensure health and long life. It may even entail a certain danger. The man who makes an athlete of himself must continue one, or else drop his exercise with slowness and caution. Our ex-pulilist accepted a sedentary occupation after he had cultivated his lungs to perhaps double the capacity needed in such an employment. A disused organ degenerates, and becomes liable to disease. The robust chest of the country youth may be a source of danger to him if he adopts life in a city office. A fine physical development does not necessarily ensure a long life. Robustness is only a relative term. In the physical education of youth, therefore, we should aim to make every organ healthy—not hypertrophied. The law that the organism must be adapted to its environment was well illustrated by the prize-fighter, who was attacked with consumption eighteen months after he had left the ring for a city office.

DRAWN OR UNDRAWN POULTRY.

The question whether poultry and game should be "drawn" or not when prepared for market has been receiving public attention, and there is likely to be some legislative action taken about it. The immense amount of poultry sent to our large cities for consumption makes the subject one of considerable sanitary interest. It is the prevalent custom now to sell poultry "undrawn." The highest prices are generally paid for fowls thus prepared—or unprepared. Even those sent from the West often, as we are informed, come in this condition, and it is the belief of some that the flesh keeps longer so. The opening of the body and exposure of the interior to air offers naturally an opportunity for putrefactive changes. At the same time, the presence of undigested food and of excrementitious substances in the animal would seem to favor decomposition. It is well-known that the viscera are the first parts to become putrid, and the continual osmosis cannot but carry some of the putrid juices to neighboring tissues.

There seems to be no definite facts as to which will keep longer under various conditions, the drawn or undrawn fowl.

The ordinary laws regarding putrefactive changes, however, certainly lead to the opinion that the removal of the viscera with their contents would be much the more certain way of insuring the freshness of the tissues. There would be no question at all as to the advisability of this procedure if the abdominal cavity were carefully dried and the incision sewed up.

The Hotel-Keepers' Association, in discussing this subject, came to a similar conclusion—that poultry should be drawn—and a bill to enforce such a procedure is to be presented to the State Legislature.

SHALL PROPRIETARY MEDICINES BE TAXED?

A discussion in the public press as to whether the stamp tax on proprietary medicines should be abolished, has drawn out a number of interesting facts. We are informed by "one of them" that $100,000,000 has been paid to the press of this country alone for advertising these preparations during the past twenty years. As the business has vastly increased of late, it would be safe to estimate that four or five

millions of dollars are now paid annually for the above purpose.

The United States Government, we are told by the same authority, has received $36,000,000 from the stamp tax since 1861. Its annual receipts at present must therefore amount to several millions. The manufacturers themselves make only the pitiable sum of a million or so per year. So, at least, we are told; but it seems a very low estimate. At any rate these manufacturers, under the grinding pressure of poverty, are trying to get the tax abolished.

To this we must oppose a most earnest protest. If there is any need whatever of an internal revenue, proprietary medicines should help to furnish it. The medical profession has a right to speak strongly upon this point, since it is best qualified to know the true value of these preparations. And it is, we believe, the general verdict of physicians that society would really be healthier if not a patent medicine existed. And society would not only be healthier but richer. The assertion that the poor man is supplied with medicine cheaply through them is arrant nonsense. For most patent medicines consist of mixtures which, costing fifteen or twenty cents, are sold for a dollar. Furthermore, these mixtures do not supply the needs of the poor man, but are rather forced upon him by unlimited advertising. He buys a "polyform" or a "saintly oil" for four times the price of an ordinary liniment which would be equally efficacious. And he does this, not because the oil is good, but because it is advertised. The patent medicine trade rests upon the twin foundation of pretentious claims on one side and credulous misery on the other. The money is coined out of the public's ignorance and suffering. If success in its manufacture can be lessened by a heavy tax, such should certainly be placed upon it.

We question whether the enormous consumption of patent medicines may not in time become an evil deserving the attention of the sanitarian and the legislator. That more money is put in their manufacture every year is manifest. The trade has already, with its money, stifled the conscience of the religious press which gives a quasi-sanctification to the most unholy specifics. Not many of the secular press can afford to take the independent stand which the New York *Herald* does. Of old, *Scribner's Monthly* defended patent mixtures; and now the venerable *North American Review* is sandwiched between outrageous panaceas. The presumably unshackled *Puck*, which some time ago devoted its cartoon against patent medicines, now includes an *advertising* cartoon of one of them in the midst of its reading matter. That there is a moral sense of the unfitness of such things is shown in the new weekly edited by Judge Tourgee, *Our Continent*. This journal in its prospectus declares that it will receive no patent medicine advertisements, and it thereby deserves well of our profession.

We repeat then, that society would be better without patent medicines.

If some are not bad or are even helpful, yet, as a whole, they are pernicious and are simply forced upon the people by unscrupulous advertising. Their manufacturers deserve no consideration or relief.

Reviews and Notices of Books.

A Treatise on the Diseases of the Nervous System. By James Ross, M.D. Illustrated with Lithographs, Photographs, and Two Hundred and Eighty Woodcuts. Two Volumes. New York: William Wood & Co. 1881.

This is a work in two volumes, the whole embracing nearly sixteen hundred pages. It evidently aims to be systematic and complete, if not actually encyclopedic in its character.

The name of the author is a new one to neurologists, and it is something of a surprise to see so pretentious a work from an unknown source. The book, on this account, will not escape severe scrutiny and criticism.

There are treatises upon the diseases of the nervous system which, like that of Rosenthal, are essentially clinical. The present work is as nearly the opposite to that as possible. The prominent features of it are its anatomical, physiological, and pathological discussions. If one wished to get an idea of what are the latest views regarding the anatomy, histology, and physiology of the nervous system, he could hardly find a more complete statement in any one hand-book. As regards the clinical and therapeutical portions, they are, as we have said, not so conspicuous. Yet every disease receives due notice. The descriptions are succinct and clear. The recommendations for treatment show a wide knowledge and very good judgment. There is a lack of evidence of any great practical experience with nervous diseases, yet the author has evidently used his opportunities well.

Dr. Ross's method of treating his subject is a very elaborate one. A large part of the first volume is devoted to the General Pathology of the Nervous System. Under this head are given chapters on The Structure and Function of the Nervous System, General Etiology, General Symptomatology, Æsthesioneuroses, Kinesioneuroses, Trophoneuroses, General Morbid Anatomy and Pathology, General Diagnosis and Prognosis, General Treatment.

Having thus devoted nearly three hundred pages to general pathology, the author takes up special pathology, beginning with diseases of the peripheral nerves. Continuing this branch of his subject, he treats of the sympathetic system, the diseases of the spinal cord, of the brain, and of the brain and cord. Under each of these special heads there is an anatomical and physiological introduction, which is quite full.

A very superficial glance at the author's work shows that he has aimed to adopt a rigidly scientific method of treating the subject in hand. The question will occur if he has not been too much so. The part on general pathology is well enough done, but it is unnecessarily long and should be cut down to a skeleton. The author presents the physiology of the nervous system very well and fully in-

deed, in some parts; in others he is not complete, though giving all that is necessary for clinical purposes. He shows a little immaturity also in his unquestioned acceptance of the chemical theories of life, and of Spencer's time and space hypothesis, for the explanation of the functions of the cerebro-spinal and cerebello-spinal systems. In fact, the handiwork of the non-expert betrays itself here and there throughout the volumes.

The work is profusely and beautifully illustrated with woodcuts, lithographs, and photographs. The latter represent cases of the arthropathies of ataxics, and patients with pseudo-hypertrophic paralysis. The author contributes some interesting facts regarding the mechanism of locomotion, obtained by studying the latter cases.

Taken as a whole, the two volumes form a really valuable addition to neurological literature. To a person who is setting out to gain some special knowledge of the nervous system they will prove particularly helpfull.

Insanity and its Treatment. Lectures on the Treatment of Insanity and Kindred Nervous Diseases. By Samuel Worcester, M.D. New York and Philadelphia: Boericke & Tafel. 1882.

This book is made up of a series of lectures delivered before the students of the Boston University School of Medicine, a homœopathic institution. We have the best desire to say nothing against this book that is injust, or that could be attributed to a sectarian prejudice. But we are compelled to say that we have never seen a worse treatise on insanity, and we cannot imagine how a worse one could be written. The author confesses that he "used freely the materials at his command," and we can fully confirm his statement. He has compiled in a wholesale fashion (and thus secured some valuable extracts in his book). But he does not seem to understand his subject except in a superficial way. He gives no pathology and very little etiology. His therapeutics, even, are quoted, and form a ridiculous jumble of hypothetical inanities.

We have had a little experience in using homœopathic remedies for mental diseases. The only remedy with which we have obtained any good results, however, is not even mentioned.

The book is, in fact, about such a thing as a not very bright student might get up for his graduating thesis. There is no cause for its being, and it is only in justice to the profession that we condemn it as we do. We know nothing about Dr. Worcester except a few reports, which made us think him capable of better things. We trust that he has such capabilities, and we would explain his present failure by supposing that he has been entirely deprived of the training and associations which help to make the scientific psychiatrist.

Handbuch der Pharmaceutischen Praxis. Für Apotheker, Ärzte, Droguisten und Medicinal-beamte. Bearbeitet von Dr. Hermann Hager. Ergänzungsbände i.–vii. 8vo, pp. 112. Berlin: Verlag von Julius Springer. 1881. (Hand-book of Pharmaceutical Practice. For the Use of Apothecaries, Physicians, Druggists, and Medical Officials. Edited by Dr. Hermann Hager. Supplementary volumes i. vii.)

This work is intended as a supplement to Dr. Hager's "Handbook of Pharmaceutical Practice," which appeared several years ago, and was designed, as its title indicates, for the use of physicians, druggists, and medical officers. The new publication is to be recommended as containing the important advances and discoveries made in the field of practical pharmacy during the last half decade, especially as regards the examination of foods and beverages, a department which was still undeveloped at the time the Handbook appeared. These supplementary volumes, seven in number, contain numerous woodcuts, and will doubtless be welcome both to those who possess Dr. Hager's earlier work and those who do not.

Illustrations of Dissections. By George Viner Ellis, Professor of Anatomy University College, London, and George H. Ford, Esq. Vol. II., February. 8vo, pp. 236. Second edition. New York: William Wood & Co. 1882.

This is the second of the two volumes referred to in one of the recent numbers of the Record. Its plates, descriptions, and practical remarks are equally good with those of the first, already noticed. We mention again that the plates are reduced on a uniform scale from the life-size drawings of the English edition, and are reproduced in fac-simile especially for Wood's Medical Library.

Human Osteology: Comprising a Description of the Bones, with Delineations of Attachments of the Muscles, the General Microscopic of Bone and its Development. By Luther Holden, Ex-President and Member of the Court of Examiners, assisted by James Shuter, F.R.C.S., M.A., M.B. Cantab. 8vo, pp. 296. Sixth edition. Philadelphia: Presley Blakiston. 1882.

No work has appeared treating any special department of human anatomy that has a more deserved popularity than Holden's "Osteology." That it is able to maintain its position goes without the saying As its title indicates, it covers the whole ground of study of the skeleton, and, aside from minute and careful descriptions of anatomical conditions and surgical relations of the bony parts, contains admirable outline plates illustrating the same. In the present edition a few brief notes on comparative osteology have been added, several of the plates have been redrawn, and a more systematic arrangement of the bones has been made.

The Diagnosis and Treatment of Diseases of the Eye. By Henry W. Williams, A.M., M.D. Pp. 464. Boston: Houghton, Mifflin & Co. 1881.

The present volume is an expansion of the author's previous smaller work on diseases of the eye. So much is now added that it is virtually a new treatise.

There is no preliminary account of the anatomy and physiology of the eye, but the author proceeds at once to a description of methods of examination, remedial means, and traumatic injuries. He then takes up the diseases of the different structures in order. The parts devoted to pathology are, as a rule, brief, and there is no discussion of theoretical questions. There is a chapter upon color-blindness and the methods of testing it.

Regarding the lately introduced operation of sclerotomy, for relief of tension, Dr. Williams says that, although it offers a fair chance of success, iridectomy is most to be relied upon.

The new operation of optico-ciliary neurotomy justly receives warm endorsement. The author's views upon glaucoma are already quite generally known, and need not be discussed here.

Altogether, we find very little to criticise in this book and very much to praise. In writing it, Dr.

Williams has most admirably fulfilled one of the functions of the specialist: that of instructing the general practitioner. He tells what he knows easily and simply, using no mystifying nomenclature and entering into no recondite scientific discussions. The book is well illustrated with cuts and colored lithographs. It contains also test-type and the test lines for astigmatism.

Fistula, Hæmorrhoids, Painful Ulcer, Stricture, Prolapsus, and other Diseases of the Rectum, their Diagnosis and Treatment. By William Allingham, F.R.C.S. Eng., etc. Fourth edition. 8vo, pp. 332. Philadelphia: Presley Blakiston. 1882.

The fourth edition of this excellent work comes to us very slightly altered from the previous edition. Here and there evidences of revision are apparent. No important additions have been made, save, perhaps, an index, and the work as a whole has not been enlarged. It still maintains its place as one of the best works written upon rectal diseases.

A Manual of Dental Anatomy, Human and Comparative. By Charles S. Tomes, M.A., F.R.S. Second edition. 12mo, pp. 440. Philadelphia: Presley Blakiston. 1882.

This work, which has now advanced to its second edition, is a study of dental anatomy, pure and simple. The whole ground is very thoroughly covered, not only in regard to the growth and structure of teeth themselves in man and other members of the animal kingdom, but in regard to important anatomical relations of these parts to each other and the functions of the same.

The illustrations are admirable and instructive. The work cannot fail to be of special value to dentists and such practitioners who are interested in the study of comparative anatomy.

A Manual on Diseases of the Eye and Ear, for the Use of Students and Practitioners. By W. F. Mittendorf, M.D., Surgeon to the New York Eye and Ear Infirmary; Ophthalmic Surgeon to Bellevue Hospital Out-door Department; Assistant to the Chair of Ophthalmology and Otology, Bellevue Hospital Medical College. Second Edition. 8vo, pp. 429. New York: G. P. Putnam's Sons. 1881.

The author has embodied his lectures to pupils in the two departments of the eye and ear, and furnished a large manual, five-sixths of whose pages are devoted to the former, and one-sixth to the latter. While we cannot agree with the author in the assertion of the long-felt want of such a practical manual, as its *raison d'être*, we desire to recommend it to the general profession. So long as its specialties remain linked in practice by usage, the union of these branches under one cover is pardonable.

Examined analytically, one notices a marked deficiency of plates; only nine woodcuts, and some of these inadequate to the text, comprise the number of uncolored plates. Had the author reproduced some of the original and admirable macroscopic woodcuts from Alt's "Human Eye," whose book is in his bibliographical list; selected less exaggerated colored plates than those of Sickel; and secured a better execution of the excerpts from Politzer's "Beleuchtungsbilder d. Trommelfells," it would have added largely to the exposition of the text. This is hardly creditable to Politzer, who is himself an accomplished artist in aural work, and wont to make his own illustrations in water, oil, and plaster.

The author gives clear and terse definitions of some of the more intricate topics, as the visual angle, conjugate foci, and the physiology of vision; pathology of squint, secondary deviation in squint, test for insufficiency of the internal rectus muscle; while farther on in the book an attempt is made to elaborate the definition with more or less confusion.

The author finds ten varieties of conjunctivitis, and thirty-three of cataract, with a corresponding multiplicity of titles. This must be, so far as the study of cataract is concerned, a confusing array of names and lenses for the elementary student.

Eight pages are given to the internal ear, five to its anatomy, and *three* to its diseases. We wish the author had written a chapter on syphilitic changes in the ear. The pathological importance of this topic is equalled only by its acoustic interest. So intimately associated is the acquirement of music and the proper perception of sound, that this optic could with propriety find place in a manual addressed to "students and practitioners." But the subject has received merely an allusion. A chapter on fissures and fractures of the petrous bone, in the light of the present literature, would have added very much to the book.

We look in vain for Siegle's otoscope as a means of diagnosis of intrinsic thickening and vibratory power of the membrana tympani. No mention is made of the audiphone, dentaphone, or audinet in chronic, non-suppurative (fibrous) catarrh of the middle ear; and we presume that Dr. Mittendorf's views of the doubtful aid of these sound-conductors correspond with those of his confrères.

The second edition is free from the too frequent misuse of Latin technical names, the misspelling of well-known terms and proper names, and the carelessness of the proof-reader, which were noticeable in the first issue.

We have given Dr. Mittendorf's manual a careful perusal, and despite its shortcomings (and what book is without them?) it should find a place on every practitioner's shelf; not only because it assumes to comprise the clinical range of diseases of the eye and ear, but since it is written in a scientific spirit by an instructor, who for many years has been enthusiastic in his work, and whose work is a large one.

Lectures on Diseases of the Bones and Joints. By C. Macnamara, F.R.C.S. Eng., etc. Second edition. 12mo, pp. 550. London: J. & A. Churchill. 1881.

The appearance of a second edition of Mr. Macnamara's work in so short a time after the first is hardly a surprise. The work is one which is so well filled with important and practical facts connected with the subjects treated of, that its value cannot be overestimated as a safe guide to the surgeon and a valuable book of reference for the pathologist and general practitioner. The author takes pains to base his assertions upon actual bedside experience, and his illustrative cases are studies in themselves. He has the rare faculty of bringing out the salient points of a disease clinically and pathologically, and of consistently following their indications in treatment. In a word, the reader gains a thoroughly practical knowledge of the diseases of bone, which he is enabled on sound, general principles to intelligently apply to the requirements of particular cases. In the present edition much material has been added referring to diseases of joints, which gives the volume a proportionate value. It is destined to be a leading work on the subjects of which it treats.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 25, 1882.

Dr. Edward C. Seguin, President, in the Chair.

Dr. D. Bryson Delevan presented, on behalf of a candidate, a specimen consisting of

A PORTION OF THE SCALP, WITH THE HAIR ATTACHED, REMOVED BY MACHINERY.

Dr. Delevan also presented a specimen of

FIBROMA OF THE TONSIL.

It was removed from a man, aged twenty-three, who was in the third stage of phthisis. The patient was not aware of the presence of the tumor, which was discovered while examining the throat for tubercular ulceration. It was situated upon the surface of the left tonsil, about three-eighths of an inch below its upper margin, and was attached by a distinct pedicle. Its surface was smooth, polished, and of a light pink color, and offered a marked contrast with the surrounding mucous membrane. The parts in the neighborhood of the tumor were congested, and the tonsillar crypts were filled with the yellow excretion peculiar to them. The tumor was easily removed by means of a small ecraseur, and without hemorrhage. Upon microscopic examination, it was found to be covered with buccal mucous membrane, beneath which, and near the periphery, was an abundant growth of young cells. The mass of the tumor was made up of fibrous tissue, containing a large supply of blood-vessels, particularly numerous near the surface. It was a fibroma. It had not given rise to symptoms, but probably was of rapid growth, and, if it had been allowed to remain, doubtless would have soon produced irritation sufficient to have attracted attention and led to removal.

The tumors one might expect to find in this region, although very rare of any kind in that locality, were adenomata, perhaps myxomata, and then fibromata.

With reference to the absence of symptoms produced by the growth, Dr. Delevan referred to a case reported by Dr. Clinton Wagner, in which a tumor an inch in length by three-fourths of an inch in width, and one fourth of an inch in thickness, almost completely filled one side of the pharynx: and it was only two weeks prior to its removal that the patient had been conscious of its presence, although it evidently was congenital. Microscopical examination determined that it was of old standing.

A PIECE OF GLASS ENCYSTED IN THE HAND.

Dr. Robert Newman presented a piece of window-glass, one and one-eighth inch long, five-sixteenths of an inch wide at one end, and one-sixteenth of an inch in width at the other end. It was removed from between the third and fourth metacarpal bones of the thin, spare hand of a young girl, who thrust her fist through a window-pane. She washed her hand, which was cut and bled a little, and thought nothing more of it. After a time a slight hardness was felt, and six weeks afterward the patient presented herself to Dr. Newman, who detected a foreign body, dissected down upon it, and removed the specimen presented, which was encysted and had given rise to no trouble. After it was extracted the wound did not heal kindly, and he was obliged to destroy the cyst with carbolic acid, when recovery began to take place. Three weeks had elapsed, and yet the wound was not entirely healed.

The President referred to a case in which he removed a portion of a narrow, uniformly shaped tack (brad) from the finger of a soldier. It was encysted, and had not given rise to any symptoms whatever.

CARIES OF CALVARIUM AND ABSCESS OF BRAIN FROM A NON-PENETRATING GUN-SHOT WOUND.

Dr. Geo. L. Peabody presented specimens accompanied with the following history. They were removed from the body of a man, twenty-eight years of age, a German laborer, who was shot on May 28, 1881. The bullet, which was lying in contact with the bone, was removed at the Chambers Street Hospital soon after the shooting. The wound was found to be non-penetrating, and the patient was treated as a dispensary case, every other day. He suffered a little from headache, and about the middle of June he vomited several times, and his headache increased. On June 18th, he was sent to the New York Hospital. On admission he complained of severe headache, he was drowsy and unwilling to talk, but was easily aroused and answered questions slowly and intelligently. His pulse was full and strong, his temperature was 97.4° F. There was no paralysis at any time. He gradually grew more and more stupid, became comatose, and died two days after admission.

The *calvarium* presented, exhibited the effect of the bullet wound above the right superciliary ridge. In that situation a button of bone, about half an inch in diameter, had been almost completely detached from the outer table of the skull, being united to it by a narrow isthmus of bone, about one-eighth of an inch wide. On the inner table the separation was less complete, extending only over about half its circumference. The bone in the neighborhood of this button was porous, the process of caries having distinctly invaded both tables of the skull. The inner surface of the frontal bone exhibited several small osteophytes, not in any way connected with the injury.

The *brain*, also presented, showed more extensive injury. The dura, pia, and brain surface beneath the site of the injury were firmly adherent, so that on gently separating the dura from the brain, a small fragment of gray matter came with it from the second frontal convolution. This was followed by the oozing of pus from the opening. The brain was then hardened and subsequently opened as shown, disclosing an abscess-cavity which was ovoidal in shape. It had an antero-posterior long diameter of one and one-half inch, and a vertical short diameter of one and one-eighth inch. It was lined by a thick pyogenic membrane, so called. It comes within three-fourths of an inch of the upper surface of the frontal lobe, and within about the same distance of the base, invading the gray matter only to a slight extent in the second frontal convolution. It was separated from the corpus striatum by about one-fourth of an inch.

Dr. Peabody also presented a specimen of

BICUSPID AORTIC VALVE—DEATH FROM PACHYMENINGITIS HEMORRHAGICA.

The patient was a young man of twenty-two years, who was found in a condition of unconsciousness and taken to the Chambers Street Hospital. It was

then recognized that he was suffering from intracranial pressure. He died a few hours after admission, having been continuously comatose since admission. No previous history could be obtained.

The *autopsy* revealed as the cause of death an extensive meningeal hemorrhage, which completely covered the right central hemisphere. The thickness of the hemorrhage was greatest at the vertex, where it was about one-fourth of an inch. The blood was in part upon the pia mater and in part within the meshes of the false membrane, which could be seen upon the inner surface of the dura mater covering the right hemisphere. This false membrane was made of connective tissue, and seemed to be disposed in layers. The deeper layers were quite distinctly pigmented, showing that there had been repeated small hemorrhages from time to time before the final copious hemorrhage that killed the patient.

The heart was normal in size; the muscular tissue was brownish in color. The cavities were all normal in size and in the thickness of their walls. The aorta showed the lesion of endarteritis deformans to a somewhat unusual degree, considering the age of the patient, and the aortic valve was composed of only two cusps. They were about equal in size, and there was no evidence, beyond a very slight thickening, of any inflammatory change in them. There were but two corpora arantii, one situated at the middle part of the cusps. There were quite distinctly three sinuses of Valsalva, and two coronary arteries. From the normal appearance of the left ventricle we thought we might justly conclude, even without a previous history, that the bicuspid aortic valve performed its function as well as a normal valve would have done.

Dr. Peabody presented a second specimen of

BICUSPID AORTIC VALVE—DEATH FROM PNEUMONIA.

The patient was C. J——, twenty-five years of age, a native of the United States, married, and a dressmaker. She was admitted to the New York Hospital January 11, 1882. She was too ill to give her history, and the following data were obtained from her friends:

She was a hard drinker, but was in good health until a week ago, when, after exposure to cold, she was suddenly seized by a chill and great pain all over the right side of her body. At this time she vomited freely. The pain was greatly aggravated by motion, by coughing, and by deep inspiration. She had taken scarcely any food during the past week, and was very nervous and hyperæsthetical. She had been delirious during one or two nights, and had had continuous high fever. She had not been able to bear the weight of a poultice over the right side, and had used various applications and numerous drugs internally. On admission, her pulse was 96; respiration, 40; temperature, 102.6° F. She was stout and well-nourished, face flushed. Urine, 1016, acid, albumen, and epithelial casts. A diagnosis of pneumonia in the upper part of the right lung was made. She continued delirious for three days, with temperature continuously elevated. During this time her heart was examined, and no murmurs were heard. Notwithstanding appropriate medication, she died, with temperature of 107.6° F., three days after admission.

Autopsy nine hours after death. There was gray hepatization of the upper lobe of the right lung, and very extensive fibrinous exudation over the lower lobe. The kidneys were in condition of diffuse inflammation. The other organs, excepting the heart, were normal. In this, as in the heart just presented, the aortic valve consisted of two cusps. They were equal in size, and had only two corpora arantii, which were not well marked. The cusps were slightly thickened, especially along their free borders. There were two coronary arteries, and two well-developed sinuses of Valsalva, at the middle of one of which was a partial division of it into two. The muscular tissue was brownish, and the cavity of the left ventricle was slightly dilated. He presumed it would be fair to infer from this dilatation, though it was but slight, that the bicuspid aortic valve had probably not at all times been competent.

In connection with these heart cases, Dr. Peabody had looked up the subject in the reports of the London Pathological Society, and in the works of several authors who have written upon the heart, such as Hayden, Peacock, Fothergill, Walsh, and others. This malformation may be either congenital or acquired. As a congenital anomaly it is more uncommon than is the other form which he had occasion to illustrate a few weeks ago, namely, the presence of *four* cusps in one aortic valve. Ordinarily the bicuspid aortic valve is not competent to close the aortic orifice during diastole; and many of the recorded cases in which this malformation has been hereditary have been sufferers from heart symptoms from birth, and have died in infancy. From the very slight amount of inflammatory thickening in both of his cases, he was inclined to regard them as congenital; and may say, congenital malformation of this kind are much more uncommon than those that have been acquired.

Dr. Willard Parker, Jr., asked, with reference to Dr. Peabody's first specimen, if there were not symptoms sufficiently well-defined to have warranted trephining.

Dr. Peabody thought that many surgeons would have trephined under the same circumstances.

The President asked Dr. Peabody if he noticed whether there was any peculiarity in the distribution of the flattening of the convolutions which was indicative of the seat of the abscess.

Dr. Peabody was unable, as the autopsy was made some time ago, to state positively, but to the best of his recollection the flattening of the convolutions was only local.

The President remarked that that was an important point. He thought it was taught that the effects of pressure in the cerebrum are distributed quite equally throughout the mass. At the last autopsy, however, of tumor of the brain which he made, there was a well-defined limitation, and the signs of pressure were very evident. The tumor was an inch in diameter, situated under the ascending convolution near the median line, and the adjacent convolutions were flattened in the characteristic manner, but the first frontal and the posterior part of the second and the third convolutions were perfectly natural, and there was only very slight flattening across the median line. On clinical grounds he did not believe in transmission of pressure in all directions, but was not aware of any post-mortem demonstration of it.

About a year ago he presented a similar specimen due to necrosis of the orbital plate of the frontal bone, from an orbital abscess. There was disease of the dura mater covering the orbital plate, affection of the pia mater, arachnoid, and gray matter, and the formation of an abscess in the frontal lobe. The patient had no paralysis, no lesions of the op-

tic nerves, no convulsions, and not any very severe pain until a short time before death. There was slow pulse, Cheyne-Stokes respiration, and gradually increasing coma. The whole of the white centre of the frontal lobe, except a portion near the convexity of the hemisphere, was destroyed close to the island of Reil and the head of the nucleus candatus. The mass of white substance connecting the posterior part of the third frontal convolution and the anterior gyri of the island of Reil, with the internal capsule, were uninjured. (See MEDICAL RECORD, vol. xix., p. 247.)

In reply to a question, the President stated that in both cases, that reported by Dr. Peabody and the one from which he obtained his specimen, the symptoms were so definite that the diagnosis of abscess was reasonable and trephining would have been justifiable.

LARVA OF A FLY DEVELOPED UNDER THE SKIN OF THE HUMAN BODY.

DR. W. R. BIRDSALL described a specimen sent to him by Dr. H. M. Bachelor, stationed about two hundred miles from Gaboon, on the west coast of Africa. The specimen spoiled and he was unable to present it. A trader, Dr. Bachelor stated in his letter, had a painful swelling upon one of his hands, which he poulticed with flaxseed meal, and soon discovered a small hole between the middle and ring fingers, from which a peculiar looking worm came, and a second one followed on the next day. At first it was thought that the worms were from the flaxseed meal, but doubt in that direction was dispelled by the fact that another workman had a swelling upon the leg from which precisely the same kind of a worm was extracted. No one had seen the animal prior to this year. Subsequently it was learned that this worm preys upon the gorilla, and that the Panwees, a tribe that follows the catching of these animals and selling them to the traders, are very commonly troubled with these worms, which are probably the larva of some species of fly. One of the specimens sent by Dr. Bachelor was about one-fourth of an inch long, one-eighth of an inch thick, and the other was about twice that size.

The society then went into executive session.

NEW YORK SOCIETY OF GERMAN PHYSICIANS.

Stated Meeting, September 23, 1881.

DR. E. GRUENING, PRESIDENT, IN THE CHAIR.

SANGUINEOUS MOLE.

DR. GARRIGUES presented a specimen of bloody mole, showing the formation of numerous hemorrhagic cysts. The patient came to him with a history of amenorrhœa of some months' standing. She did not suppose herself to be pregnant. In March, 1881, however, a physician had told her that she was pregnant, her last menstruation having appeared in January. A dirty-looking, tarry discharge was coming away from the uterus when Dr. Garrigues first saw her. This was on the 10th of August of the same year. Only local treatment was employed for three days. On the fourth day she was seized with severe uterine pains, and a rounded mass was discovered through the patulous os. Very soon the specimen presented was discharged in its entirety. It was found to be a bloody mole, or so-called apoplectic ovum. Its size was unusually large, and its inner surface was the seat of numerous blood-filled cysts, varying in size from a pea to that of a cherry. No trace of a placental site or fetal structure was visible. The patient denied having had syphilis.

INTERNAL STRANGULATION OF SMALL INTESTINE.

DR. WENDT presented a specimen illustrating the occurrence of internal strangulation from the passage of a loop of small intestine through an opening in a false mesentery, which proceeded from a redundant sigmoid flexure. (See MEDICAL RECORD, October 1, 1881.)

DR. JACOBI said that a certain amount of redundancy of the sigmoid flexure was of normal occurrence in infancy, but that the persistence of such a condition through adult life was quite exceptional.

DR. WENDT thought that the present case would have been a very favorable one for an early operation. No doubt a laparotomy would have been successful before the advent of peritonitis, as the strangulated loop of intestine could have been readily liberated. The only practical difficulty in the way of a rapid discovery of the site of the trouble, lay in the existing tympanitic distention of the gut, and the position of the strangulation, which was low down in the pelvis.

DR. JACOBI did not regard this as a contra-indication to the performance of an operation. Similar conditions obtained in almost all laparotomies for strangulation. The distended loops of intestine might with impunity be removed from the abdominal cavity, and replaced after liberation of the strangulated gut.

NEURO-SARCOMA OF TIBIAL NERVE.

DR. GERSTER presented a specimen of sarcoma involving the tibial nerve, which he had successfully removed from a patient's leg some time previously. The tumor was spindle-shaped, and measured seven inches in length. The diagnosis had been rendered difficult on account of the hidden position of the growth, and its gradual evolution. Over the main bulk of the tumor, bundles of nerve-fibres were seen to pass in a longitudinal direction. On either side of the neoplasm the tibial nerve was found to be diseased to the distance of about three inches. The age of the male patient was forty years, and his recovery after the operation was satisfactory.

EPITHELIOMA OF THE SUPERIOR MAXILLA, EYE, AND NOSE.

Dr. Gerster also exhibited a specimen of epithelioma, removed by operation from a man aged fifty years. The growth was extensive, involving the eyeball, with the conjunctiva and lids, as well as a portion of the nose and upper jaw. The bulbus oculi had lost its mobility, owing to which circumstance the conclusion appeared justifiable that the intra-orbital tissues were extensively involved. The prognosis, therefore, seemed doubtful. During the progress of the operation, however, it was ascertained that the posterior portion of the contents of the orbital fossa was free from disease. It was thus possible to enucleate the eyeball within healthy tissue, which materially improved the patient's chances of a cure.

RARE DOUBLE MONSTER.

DR. MOELLER showed a double monster which he had delivered after version by forceps, at about the seventh month of utero-gestation. It was found to

belong to a type of monstrosity known as syncephalus and thoracopagus. There were two heads, joined together at the occipital border, and one thorax, with a supplementary half thorax. The common abdomen had a large cleft, from which a portion of liver and some intestines protruded. Four arms and hands, and as many well-formed lower extremities were present. A spina-bifida also existed.

SARCOMA OF THE LIVER.

Dr. Seibert read the history of a case of probable primary hepatic sarcoma, and exhibited some gall-stones, of which over a hundred had been found in the gall-bladder. The patient, a man aged fifty-two, had been seriously sick only about three months.

Several months before this time he had merely complained of vague gastric disturbances and loss of appetite, whereas previously he had been perfectly well. A tumefaction over the hepatic region was readily visible, and as the tumor grew rapidly, a diagnosis of hepatic sarcoma was made. Death took place with symptoms of general peritonitis. At the autopsy the gall-bladder was found to be surrounded by a spongy, dirty-looking mass. The neoplasm had attained about the size of an adult head, and a sharp boundary line separated it from the surrounding liver-substance, which was intensely congested. Microscopical examination showed the questionable mass to consist principally of small round lymphoid corpuscles, many of which were in a condition of fatty degeneration. It was therefore concluded that the growth was a primary lymphosarcoma, and not a hepatic abscess. No other tumors or noteworthy lesions were discoverable in the different organs of the body.

AUTOMATIC TRACHEAL RETRACTOR.

Dr. Caillé showed the above instrument and explained its mode of application. (See Medical Record, December 24, 1881.)

HYPER-PERISTALSIS OF THE STOMACH.

Dr. Langmann reported a case of abnormally increased gastric peristalsis, in a patient having a dilated stomach. The phenomenon in question had been recently described by Kussmaul in *Volkmann's Sammlung Klinischer Vortrage*. The patient had been for a long period suffering from dyspepsia, with dilatation of the stomach. The lesser curvature of the stomach extended below the umbilicus. A vermiform contraction of the stomach occurred spontaneously at certain intervals, and was accompanied with great pain. The contraction was first visible at the pylorus, and thence extended to the cardiac portion. The entire phenomenon lasted only about two seconds. By tapping the abdomen, a visible contraction could be brought on at will. Introduction of the œsophageal sound invariably excited vomiting. The capacity of the stomach was about five quarts. A course of washing out of the stomach, carried on at first twice daily, was soon followed by marked relief.

LAPAROTOMY FOR INTUSSUSCEPTION OF THE COLON IN A CHILD.

Dr. H. F. Kudlich narrated the history of a case of intussusception, in which laparotomy was performed, but which terminated in the death of the patient. The latter was but two months old, and had been perfectly well up to the time of the fatal illness. The onset of the disease was marked by its suddeness, occurring at night on the 21st of September. On the following morning the discharge from the bowels was blood-stained, and later on the evacuations consisted exclusively of grumous blood. There was also a constant oozing of a sanguinolent fluid from the anus. At the same time the little girl grew rapidly weaker. The invaginated portion of the colon was felt low down in the rectum, but all attempts at reducing it proved unavailing. Dr. Jacobi, who was asked to see the case in consultation, advised and subsequently performed laparotomy as a last resort. The operation was performed eighteen hours after the first appearance of morbid symptoms, and the infant died five hours after its completion.

At the autopsy, the colon had a bluish black appearance, and was found to be very friable. Gangrene, if not actually present, was certainly imminent. The reduction of the invaginated portion had been accomplished only on exercising considerable force.

Dr. Jacobi supplemented the above history by the following remarks: Palpation and percussion had thrown no light on the nature and seat of the affection, which was only made out with certainty by rectal exploration. Copious enemata and attempts at manual reduction had been futile. By the use of a suitable catheter, a reduction en masse was obtained. This latter was made evident by the fact, that during its performance the rectal walls became tense, thin, and smooth. He had made similar observations on previous occasions, which clearly showed the illusory nature of such, at first sight successful reductions. In this instance a hard, sausage-like mass was distinctly felt in the left iliac fossa, after the intussuscepted gut had been pushed upward by means of the catheter.

As regards the operation, the ordinary incision in the median line was practised, in the space between the symphysis and umbilicus. The child's bladder, however, extended so high up above the symphysis pubis, that this incision opened the viscus. When this circumstance became apparent, the incision was prolonged upward to the right of the navel. Loops of intestine, distended with gas, at once protruded into the wound, and the invaginated colon at length came in view, having already assumed a dusky hue. By means of forcible massage and inversion, the invagination was finally reduced. During these manipulations, the tumefied serous coat of the intestine became fissured in several places. In order to return the coils of intestine to the abdominal cavity, it became necessary to repeatedly puncture them, so as to permit the escape of gas. A drainage-tube was introduced through the urethra into the bladder, and the wound in the latter organ allowed to remain open. The child, as already stated, lived five hours after the operation. Invaginations were extremely rare in infants of such tender age, but were more frequently seen at five or six months. Finally, allusion was made to a similar case, which had been successfully operated upon by Dr. Sands.

Stated Meeting, October 28, 1881.

Dr. H. Klotz, President, in the Chair.

TRAUMATIC PARALYSIS OF THE FACIAL, AUDITORY, AND ABDUCENS NERVES.

Dr. Seessel exhibited a patient, aged forty-four, who, in consequence of a violent blow upon the right side of the face, had developed a paralysis involving the facial, auditory, and abducens nerves. Immediately after receiving the injury, the patient

had been completely bereft of consciousness for about ten hours. The zygomatic arch had been fractured, and blood had escaped from the ear. One week after receipt of the injury the patient first came under his observation, and the above diagnosis was at that time made out. Pain had been altogether absent. Dr. Seessel thought that the paralysis must be a peripheral one, and for the following reasons: All the branches of the facial nerves were involved, and all reflex movements were lost. The muscles involved were ascertained to be undergoing morbid changes. Trophic disturbances were also unmistakably present, and the secretion of sweat was diminished. The seat of the lesion, which must consist of fracture and hemorrhage, was located at the entrance of the facial nerve into the ear. The prognosis was not an absolutely bad one, since the galvanic excitability of the muscles was only partially lost.

RESECTION OF SUPERIOR MAXILLARY NERVE FOR INTRACTABLE NEURALGIA.

Dr. Gerster showed a man, aged thirty-six, upon whom he had successfully operated for intense recurrent neuralgia of the second branch of the trigeminus. The choice of the operative method was according to Langenbeck's plan of temporary exsection of the superior maxilla. The indication for its performance was a violent paroxysmal neuralgia, which had resisted all attempts at treatment. In connection with the previous history of the patient, it might be mentioned that his occupation necessitated frequent exposure to extremes of temperature.

Eighteen years ago the patient first began to suffer, and in the year 1877 the paroxysms became so severe that he sought relief by an operation, performed by Dr. Mott. In view of the fact that the attacks of pain were only controlled for a very short period, and further, that no cicatrix was now visible, the surgical interference had very probably only consisted in section of the nerve. Dr. Hassloch next treated him, and large doses of salicylic acid secured temporary remissions of the attacks. Quinine was also found serviceable in a large dose on one occasion. These drugs, in conjunction with morphine, at length failed to give him relief, and he then consulted Dr. Weir.

Under the advice of the latter, aconitine was given in doses of $\frac{1}{100}$ of a grain every two to three hours for one week. This resulted in so marked and apparently lasting an improvement, that the case was published in 1880 as cured. The pains, however, returned after some months, and finally the patient applied to Dr. Gerster for relief. An operation being consented to, this was done in the following way: A curved incision, extending at once to the bone, was carried from the zygoma to the corresponding nasal orifice. The soft parts, including the periosteum, were then lifted upward, thus exposing, after section of the masseter muscle, the pterygo-palatine fossa. The superior maxillary bone was next sawed through in the direction of the first incision. Then a second deep incision was made, beginning at the inner canthus of the eye, and joining the first at an obtuse angle. The nerve thus being exposed, was cut at the infra-orbital foramen. The zygomatic arch was now severed by means of a saw, and, after cutting through the bottom of the bony orbit, the superior maxilla was gently lifted out, its only connection being with the nose. The nerve was, in this way, extruded from the infra-orbital canal, seized with a pair of forceps, and again cut at the foramen rotundum.

Hemorrhage, at first quite profuse, was soon controlled. The jaw was replaced, a drainage-tube was inserted into the pterygo-palatine fossa, and the incisions closed by sutures. The disinfectant wash employed was an eight per cent. solution of chloride of zinc.

The patient bore the operation well. There were no untoward symptoms, and osseous union was complete after six weeks. Langenbeck, who devised this operative method, originally intended it for the removal of naso-pharyngeal growths. But, as was shown in this case, it might be readily employed for exsecting the superior maxillary nerve. The principal advantage of this plan over that of Carnochan, was owing to the circumstance that the former offered a much larger field for accurate inspection and subsequent surgical interference.

FIBRO-CYSTIC TUMOR OF KIDNEY.

Dr. Garrigues presented a specimen of tumor of the kidney, removed at the Woman's Hospital by Dr. Thomas. The solid portions of the growth were fibro-myxomatous. (This case has been reported elsewhere in full.)

Dr. Welch had examined the neoplasm, and was disposed to regard it as fibro-cystic, and not myxomatous. He based his opinion on the fact that the fluid removed from the smaller cysts showed spontaneous coagulation.

Dr. Garrigues remarked that no clot had formed in the fluid removed from the principal cysts, as late as two days after it was first drawn.

Dr. Noeggerath believed that this apparent discrepancy might be accounted for by a recognition of the fact that the fluid from fibro-cystic tumors would coagulate or not, accordingly as it contained or was free from blood. Probably Dr. Garrigues had obtained fluid unmixed with blood, whereas Dr. Welch had examined bloody fluid.

Dr. Garrigues was positive that the fluid submitted to him for examination had contained blood, and yet a clot had not formed. Moreover, he was of opinion that the fluid contained in fibro-cystic growths showed spontaneous coagulation. On the other hand ovario-cystic fluid only exceptionally behaved in this way.

CONGENITAL MALFORMATION OF CRANIUM.

Dr. Wettengel presented a specimen, which consisted of an infant twenty-four hours old. It was born with the roof of the cranium completely absent. The occipal, parietal, and frontal bones showed only a rudimentary development. There was a cutaneous pouch containing the encephalon. The fœtus also had a redundant toe on the right foot.

Dr. Jacobi remarked, concerning the genesis of such malformations, that in an early stage of embryonic development, a supervening meningitis would inhibit the further growth of the cranial bones. Such an arrest of development might be either complete or partial. A regressive metamorphosis of already existing cerebral structures might also take place, leading finally to the production of anencephalous monsters.

In those cases where the rudimentary cranium contained no brain-substance, and only showed blood-vessels and connective tissue, the malformation belonged to the type of pseuden-cephalous monsters. In the specimen just presented, a septum appeared midway between two lateral halves of

the mass constituting the encephalon. Two separate cerebral vesicles must therefore have existed, and the arrest of development accordingly must have taken place at about the third month of utero-gestation.

COMPLETE DIPHTHERITIC CAST OF BLADDER.

Dr. Jacobi presented a specimen, consisting of a diphtheritic cast of the entire bladder. It was removed from the body of a man, aged sixty-six, who died with symptoms of septic ulceration of the bladder. For many years the patient had suffered from various difficulties in passing his water. Often the urine had a very offensive odor. It was mixed with blood, and also contained a large proportion of pus. Repeatedly, almost clear blood escaped after micturition. The fetid smell was improved by washing out the bladder. Five days before his death, collapse occurred, and a catheter being introduced into the distended bladder, failed to remove any urine. Instead, an ichorous, very offensive fluid escaped. A malignant neoplasm was supposed to be present, blocking up the neck of the bladder. Attempts to puncture the bladder above the symphysis proved fruitless, and the patient died.

At the autopsy, the bladder was found adherent to neighboring loops of small intestine. On opening the organ, by incision, it was seen to be paved with a complete cast, which was attached to the muscular coat. The latter was hypertrophied in certain places, and abnormally thin in others. It was the presence of this vesical coating that had prevented the passage of the catheter.

STRANGULATED UMBILICAL HERNIA—EXSECTION OF A PIECE OF THE TRANSVERSE COLON.

Dr. Gerster gave an account of the above operation, and presented as a specimen the excised portion of the transverse colon. The patient was a woman, aged sixty-six. For many years she had suffered no discomfort from the presence of an umbilical hernia of about the size of a small fist. When seen by Dr. Arcularius, the hernia had been strangulated for about sixteen hours. Vomiting was severe, and the tumor being irreducible, Dr. Gerster was asked to see the patient in consultation.

It was decided that immediate herniotomy was necessary. There being an abundance of subcutaneous fat, an incision six inches long became necessary. After incision of the constricting ring, the liberated gut was examined and found to show signs of gangrene, although ulceration or perforation had not yet occurred. Excision of the affected portion of the gut was at once undertaken. The excised piece measured twenty centimetres. A double series of eighteen catgut ligatures was applied, the sutures being made according to the plan of Lembert. On removing the temporary sutures, some intestinal contents were seen to ooze out. The abdominal cavity having been cleansed, the gut was returned. Previously, however, it became necessary to apply three longitudinal sutures, on account of a rent produced by the tearing of one stitch, through the friable intestinal wall. The duration of the operation was one and one-half hour. The patient rallied well immediately after the surgical interference, but subsequently died in collapse, with symptoms of peritonitis. An autopsy was not permitted.

In conclusion, Dr. Gerster explained the circumstances which had led him to prefer exsection of the gut to the establishment of an artificial anus.

Dr. Meyer remarked that the prognosis of establishing an artificial anus would have been less unfavorable than Dr. Gerster was inclined to believe, and for this reason, in his opinion, this method of procedure should have been selected.

Dr. Gerster replied that the attending conditions were far more unfavorable in umbilical hernia than in ordinary inguinal hernia, and that the recognition of this fact had been one reason why he had not attempted the establishment of an anus præter-naturalis.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 10, 1882.

Dr. T. M. Markoe, President, in the Chair.

A UNIQUE CASE OF FRACTURE OF THE STERNUM.

Dr. L. A. Stimson mentioned a case, in his service in Bellevue Hospital, of fracture of the sternum, due to a fall upon the shoulder, bringing the clavicle against the upper end of the sternum with such force as to carry with it a small fragment of the bone, produce a displacement of the inner end of the clavicle, and give rise to distinct crepitus. There was displacement of the inner end of the clavicle upward nearly half an inch, and the first rib was exposed beneath it. There was distinct crepitation, but it could be produced only by pressure against the sternal end of the clavicle downward and outward. Considering the displacement, which was not that of a simple dislocation of the sternal end of the clavicle upward, and considering the direction in which pressure caused crepitus, he saw no interpretation of the condition except that a fracture had occurred running obliquely from above downward and outward. The fragment must be very small because the function of the sterno-cleido mastoid muscle was not interfered with. The evidences of fracture were localized pain below the sternal end of the clavicle, ecchymosis, swelling under the clavicle, exposure of the first rib to touch, and crepitus produced in the manner described. Drawing the shoulder backward produced no effect whatever upon the deformity. Probably the fragment broken off did not include the entire thickness of the bone.

[Two weeks after the injury, the swelling having subsided, the inner end of the clavicle was freely movable, and, while it was drawn upward by assistants, crepitation could still be got by pressure upon the sternum with two fingers, one near the median line of the upper end, and the other on the outer border near the junction of the first rib.]

HYDROCELE, OF SIX MONTHS' STANDING, WITHOUT TRANSLUCENCY.

Dr. A. C. Post narrated a case as follows: He recently saw a patient with a scrotal tumor, considerably larger than a goose's egg, which extended so far up toward the groin that it was difficult to determine whether or not it came from the inguinal canal. There was a feeling of fluctuation, but he was unable to make out any translucency. The facts that the tumor was only about six months' standing, and that the patient had no knowledge of its ever having been reducible, also that when it first attracted attention it was of nearly the same size as then, suggested to him the propriety of making an exploratory puncture. He found the investments of the sac very thick, but the fluid withdrawn was clear. At first he had a little hesitation concerning the nature

of the tumor on account of the absence of translucency.

FIBRO-SARCOMA OF THE ISCHIUM.

Dr. R. F. Weir presented a specimen, with the following history: It was removed from a man forty-eight years of age, and without hereditary history. Two or three years ago he fell down stairs, striking his buttocks quite severely upon several steps. It was not until about eighteen months ago that he noticed a slight tumor upon the posterior aspect of the thigh, high up, but it did not increase rapidly in size, nor give rise to much inconvenience. His only complaint had been of pains, varying in severity, not very acute, along the posterior portion of the right thigh, none in the calf of the leg, and none in the sole of the foot. The tumor presented itself about two inches below the tuberosity of the right ischium, movable laterally, not up and down; edges indefinite, evidently beneath the fascia lata, and, so far as he was able to appreciate its size by palpation, it was supposed to be about twice as large as an ordinary hen's egg. An attempt to render the limb bloodless failed, and the ablation of the tumor with some difficulty was accomplished by an incision nearly six inches in length. The tumor, when removed, weighed a pound and measured seven inches in its longest diameter.

In the dissection it was supposed that it might be blended with the common origin of the muscles arising from the ischium. That supposition, however, was not absolutely correct, although the tendon of the semi-tendinosus was lost in the mass, but that of the biceps was not involved.

Again it was thought that it might be one of those rare tumors arising from the sciatic nerve, which do not always give rise to severe pressure effects upon that nerve. In fact, however, this nerve was found upon the anterior portion of the tumor, but a careful dissection showed that it was entirely separable from it.

The tumor, in reality, had its origin from the upper portion of the tuberosity of the ischium in the ascending ramus, curving somewhat around into the sciatic notch, whence it was detached after considerable troublesome dissection. It was irregularly lobulated like a fatty tumor, and dense, and, from a subsequent microscopical examination, was a fibro-sarcoma.

Its origin was unique, and seemed to point directly to the traumatism as the cause.

EXOSTOSIS IN THE POPLITEAL SPACE.

Dr. L. S Pilcher presented a tibia, which had, upon the inner and posterior aspect, near its head, two projections. The upper one was a nipple-like process, immediately beneath the line corresponding to the epiphyseal junction. Toward the fibular side, still posterior, there was a much more prominent process of bone, which extended backward and downward to the distance of three fourths of an inch, like the spur of a cock.

It seemed to be one of those cases in which a succession of bony growths had been observed, receding from the epiphyseal line, and increasing in the extent of their development according to the distance from that point.

GONORRHŒA OF SIX WEEKS' STANDING—ABSCESS OF THE PROSTATE—GANGRENE OF THE BLADDER—SUPPURATIVE INFLAMMATION OF THE KIDNEYS.

Dr. E. Mason presented specimens which illustrated rapid and extensive disease of the bladder, prostate, and kidneys, supervening upon an attack of gonorrhœa. They were accompanied with the following history. A man, thirty-two years of age, entered his service at the Roosevelt Hospital on the 6th of December, 1881, with the history that six years before he had an attack of gonorrhœa, again three years ago, and none subsequently. He came in unable to pass water. His bladder was distended so as to reach nearly up to the umbilicus. The only instrument which the house-surgeon was able to introduce was a flexible catheter, No. 4. Two or three days afterward a larger size flexible rubber instrument could be introduced easily, and the urine drawn. Finding that the patient suffered no apparent pain upon pressure above the pubis, but was obliged to have his urine drawn, Dr. Mason examined with reference to the prostate on December 13th, and detected that the right side was very much enlarged, fluctuating, and tender. Again he denied having had gonorrhœa since three years ago, but a few days afterward he confessed having had gonorrhœa about six weeks previously, and that he had suffered from bladder symptoms three weeks before admission to the hospital. Two days afterward, four ounces of offensive pus passed by the urethra, and on the next day pus passed from the rectum. The urine was so offensive, and also the pus discharged from the rectum and from the urethra, that it was necessary to remove the patient to one of the outbuildings; but he complained of no pain, sometimes passed his water without assistance, at other times had it drawn; sometimes passing it through the urethra, and at other times through the rectum. On the eighteenth day after admission he became delirious, and died on the following day comatose.

The autopsy revealed the bladder distended above the symphysis, its peritoneal surface covered with considerable recent plastic exudation, its walls necrosed, its mucous membrane destroyed or greenish and gangrenous throughout, with occasional irregular patches of exudation. The ureters were considerably dilated and filled with muco-pus. The kidneys were considerably increased in size, the pelves were the seat of suppurative inflammation; both kidneys were infiltrated with small and large aggregations of pus, and in the right kidney there was a uniform infiltration with pus. The prostate was the seat of an abscess which opened into the rectum and into the urethra.

The case was interesting as illustrating how extensive disease may follow rapidly upon gonorrhœa. The patient complained only a very little of pain. The temperature was not high, except once, when it reached 104° F.

In reply to questions, Dr. Mason said it was the opinion of the house surgeons that the catheter had been used, but unsuccessfully, before the patient was admitted to the hospital. The reason why he did not open the fluctuating tumor, which he felt per rectum, was because he was told that pus discharged from the urethra. He had opened acute abscesses through the perineum, but there was no tenderness in this case to call his attention in that direction: and besides, he supposed that the escape of pus from the urethra was free.

Drs. Weir and Sabin referred to cases which terminated fatally within four to six weeks from kidney complications following acute gonorrhœa.

FRACTURE OF THE ACROMION PROCESS OF THE SCAPULA.

Dr. T. T. Sabine presented the clavicle and scapula removed from a dissecting-room subject. On

the scapula there was a separation of the acromion process, which was either a fracture or a case of non-union of the epiphysis. He believed that it was a fracture, (1) because the fragment was too large to be a separated epiphysis, the line of junction between the spine and the point of separation was farther back than the line of junction between the epiphysis and the spine of the bone; (2) because the separation was greater than it usually is when there is non-union of the epiphysis. Again, it almost always occurs, not invariably, when the epiphysis upon one side is not united that the one upon the opposite side is also separated. At one time it was supposed that such was invariably the case, but subsequent observations had proved the supposition to be incorrect. In this instance the clavicle and scapula upon the opposite side were perfectly normal.

DISLOCATION OF THE KNEE.

THE PRESIDENT presented a specimen of dislocation of the knee, which, on account of its rather rare occurrence, he regarded as worthy of special note. The man fell from a scaffold fifteen or twenty feet high, and received a compound fracture of the skull, together with a dislocation of the knee. He was brought to the hospital in a condition of partial insensibility. The almost complete anæsthesia produced by the compound fracture of the skull enabled him to make a careful examination of the knee, and it was determined that there was complete separation between the head of the tibia and the condyles of the femur, the tibia riding up an inch or more beyond the condyles.

One fact in connection with the manipulation of the limb for the reduction of the dislocation was especially interesting, namely: it was impossible to move the bones a particle by any force in the direction of extension that could be applied with the hands alone, but at the same time, when the limb flexed, the contour of the joint was restored perfectly. On again making extension, nothing could prevent the bones slipping out as before.

The patient lived four days and died as the result of the compound fracture of the skull. Dissection of the knee revealed the following:

"The displacement is such that the whole head of the tibia is behind and partly above the posterior surface of the femoral condyles. The popliteal space is, of course, obliterated. No fracture exists, except a small crack on the anterior lip of the tibia, which separates but does not detach a small fragment of bone.

"Of the muscles, the outer head of the gastrocnemius is torn almost completely across, opposite the prominence of the outer condyle. A few fibres only of the inner head are ruptured. The popliteus is, of course, entirely torn across. The plantaris could not be easily identified.

"Both the popliteal artery and vein are uninjured, but are pushed back and somewhat stretched by the head of the tibia, over the posterior edge of which they pass at a considerable angle. The sciatic nerve is uninjured, but the peroneal, at about half an inch from the point at which it leaves the sciatic, is three-quarters torn across.

"The ligamentum posticum Winslowi is torn nearly transversely across, and hangs in irregular shreds. The crucial ligaments are both torn completely across. The posterior fibres of the internal lateral ligament are ruptured, the anterior two-thirds of the ligament being intact. The external lateral ligament is torn off from its attachment to the femur over almost its entire breadth, a few fibres only of its anterior part remaining intact, where it is confounded with the aponeurosis of the quadriceps extensor.

"All the tissues are so infiltrated with blood as to make their distinct identification uncertain and difficult. The inner inter-articular cartilage is torn into two pieces, the posterior half remaining in contact with the articular surface of the tibia. The outer one is intact."

DR. WEIR referred to a case of dislocation of the knee which he saw when house surgeon, when there was rupture of the middle and internal coats of the artery. Gangrene supervened and amputation was performed.

The society then proceeded to the transaction of miscellaneous business.

Correspondence.

DR. SKINNER'S CASE OF RUPTURED PULMONARY INFARCTION (?).

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the number of THE MEDICAL RECORD for December 31, 1881, which has just reached me, I see that Dr. Skinner has reported what seems to him a unique case of ruptured pulmonary infarction. I must be allowed to enter a protest against the case going on record as such. Anyone who will read over the clinical history of the case (unfortunately it is not given very fully), and then the account of the autopsy, will, I am sure, be convinced that we have to do here, not with pulmonary infarction, but with an aneurism of one of the blood-vessels of the lungs, probably a branch of the pulmonary artery.

The *dry* cough, the absence of any account of dyspnœa, and the sudden sharp pain in the chest, followed by bloody expectoration, are certainly all against infarction; while a history of syphilis, the dry cough, and the sudden mode of death occurring in a man well enough to be walking about, are certainly in favor of aneurism.

In considering the autopsy, the chief points to note, are the hypertrophy of the *right* ventricle, the atheromatous aorta, the enormous quantity of blood in the pleural cavity, the large rent extending from the "infarction" to the surface and *communicating with the pulmonary artery*, and finally, the "infarction" itself. Of the latter the report says, it "was superior and posterior to the artery, was *laminated*, and was contained, in part, in what seemed to be a *fibrinous sac*. It was about three inches in diameter, its *layers were concentric*, and its central parts presented, here and there, a grayish or yellowish dense inelastic structure. The *strata* of this central mass were so arranged as to overlap each other, and seemed to have been deposited at irregular intervals, although there was no fluid material between these layers. *They would peel or break off from the mass like the layers taken from a raw onion or cooked beet.* At the periphery of this mass *adjacent to the pulmonary artery*, were three or four coagula, evidently of more recent deposit and growth. They were almond-shaped, filbert-size, and disconnected from both the artery and infarction proper. The walls of the pulmonary artery at this point, if any existed, could not be distinguished, but what seemed to be their degenerate

coats or the remains of the primary focus of the infarction was present in the form of a brittle, glistening, though scarcely calcareous deposit on the proximal (cardiac) surface of the infarction."

I have taken the liberty of italicizing those portions of this description which seem to me to point with particular emphasis to the fact that the supposed infarction was an aneurism nearly filled with fibrinous deposits, and the picture is so clear and characteristic that an analysis on my part of the appearances seems superfluous. The fact that the *right* ventricle was hypertrophied, would also be a factor in favor of aneurism of one of the branches of the pulmonary artery, rather than of one of the bronchial vessels.

If we accept Cohnheim's generally adopted theory of hemorrhagic infarction taking place from a venous reflux into the area previously supplied by the plugged artery, or Litten's, that it is due to a collateral arterial circulation sufficient to fill the capillaries, but too feeble to maintain a circulation in them, in either case it becomes apparent that the blood-pressure in the infarction is not only not increased, but even below the normal. How, then, I would like to ask, could such an infarction not only rupture itself, but also tear through a large amount of apparently normal lung-tissue? That the blood found in a hemorrhagic infarction is not due to a rupture of capillaries, but to a diapedesis of red blood-corpuscles, is, since Cohnheim published his "Untersuchungen über die embolischen Processe," a generally accepted fact. How then could fibrine be deposited in layers in an infarction? Such a large infarction, too (three inches in diameter), would be almost unheard of near the hilus, for it is a rule that infarctions increase in frequency and size the farther away from the hilus they are situated.

I think that any one who will go over the case carefully will come to the conclusion that I have, namely, that the patient died from the bursting of an aneurism of a pulmonary artery, the blood tearing through the lung and emptying itself into the pleural cavity, and also that the rupture of a hemorrhagic infarction is an impossibility.

Very truly yours,

WALTER MENDELSON,
of New York.

LEIPZIG, GERMANY, January 25, 1882.

VENESECTION.—Dr. Dolan (*Medical Press and Circular*, May 18, 1881) comes to the following conclusions respecting venesection: 1st, venesection has no direct influence over external or internal inflammation; 2d, it is useless in external inflammations; 3d, it is useful in those internal inflammations which affect the cardiac and respiratory functions; 4th, local bleeding has a potent, useful effect in external inflammations; 5th, local bleeding, in cases of internal inflammation in which a direct capillary circulation exists between the skin and the part affected, is of decided benefit; 6th, the value of local bleeding when these indications are not present, is doubtful. In the opinion of the therapeutical editor of the *Review*, these conclusions certainly affirm what will be accepted by all reasoning therapeutists as true, and they, most assuredly, are destitute alike of the provenesection cant and its opposite, which have alternately been prevalent and are certainly about equally pernicious and absurd.—*Chicago Med. Review.*

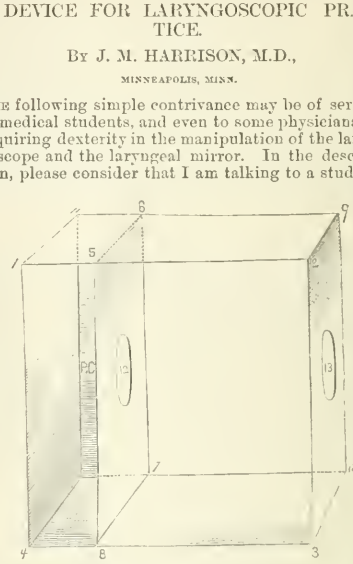
New Instruments.

A DEVICE FOR LARYNGOSCOPIC PRACTICE.

By J. M. HARRISON, M.D.,

MINNEAPOLIS, MINN.

THE following simple contrivance may be of service to medical students, and even to some physicians, in acquiring dexterity in the manipulation of the laryngoscope and the laryngeal mirror. In the description, please consider that I am talking to a student.



The above figure represents a pasteboard box, four inches square and two and one-quarter inches deep, with a partition (5, 6, 7, 8) placed one inch (4, 8) from the back (4, 1, 11) of the box. This partition separates a posterior chamber (PC) from an anterior chamber.

Circular holes (13 and 12) the size of a silver half-dollar are cut in the centre of the front end of the box (2, 3, 10, 9), and also in the centre of the partition (5, 6, 7, 8). A lid fits over the side (1, 2, 3, 4), making a closed chamber (PC).

On the top, bottom, and sides of PC are pasted clippings from a newspaper.

Let us now imagine the lips of our patient to be at 13, to be the mouth, 12 to be the passage from the mouth to the pharynx, and let the upper portion of PC represent that portion of the pharynx, and the lower portion of PC be the region of the larynx.

Here you have a patient who never becomes weary and never *gags!*

Now take your mirrors, and passing one through the openings 13 and 12, try to read the printing on the sides of PC.

After you think you know just where everything is located, take a wire and *try to touch* what you see. In other words, make *local applications* to the pharynx and larynx.

When you can accomplish this with ease, run a rubber tube through the bottom of the posterior chamber, and *breathe* into PC while making your examinations.

Finally, when you feel sure that you know how to

use the laryngoscope, get a patient who has the pleasant peculiarity of always *gagging* just at the moment when you flatter yourself that you see something, and you will realize how simple and easy it is to use this means of making a diagnosis of pharyngeal and laryngeal troubles.

DECEMBER 15, 1881.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 5, 1882, to March 11, 1882.

ALEXANDER, R. H., Major and Surgeon. Now awaiting orders, to report in person to the Commanding General Department of the Missouri for assignment to duty. S. O. 52, A. G. O., March 6, 1882.

BROWN, H. E., Major and Surgeon. Now awaiting orders, to report in person to the Commanding General Department of the South for assignment to duty. S. O. 52, C. S., A. G. O.

DICKSON, J. M., Capt. and Asst. Surgeon. Now awaiting orders, to report in person to the Commanding General Department of the East for assignment to duty. S. O. 52, C. S., A. G. O.

LAUDERDALE, J. V., Capt. and Asst. Surgeon. Relieved from duty in the Department of the South, and to report in person to the Commanding General Department of Dakota for assignment to duty. S. O. 52, C. S., A. G. O.

FINLEY, J. A., Capt. and Asst. Surgeon. At expiration of his present leave of absence, to be relieved from duty in the Department of the East and to report in person to the Commanding General Department of Texas for assignment to duty. S. O. 52, C. S., A. G. O.

GARDNER, EDWIN F., Capt. and Asst. Surgeon. To report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and on its conclusion to report by letter to the Surgeon-General. S. O. 52, C. S., A. G. O.

ROBINSON, S. Q., Capt. and Asst. Surgeon. To report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, to report by letter to the Surgeon-General. S. O. 52, C. S., A. G. O.

THE SPECIFIC CHARACTER OF TUBERCULOSIS, as lately claimed by Cohnheim, is affirmed by M. Toussaint, Professor of Comparative Physiology in the Veterinary School at Toulouse. The tuberculosis induced by placing foreign bodies under the skin is "false." The tubercles thus formed, though morphologically identical with true tubercle, are pathologically distinct. Inoculation of the false tuberculous matter does not cause tuberculosis.

The true tubercular poison is rather a pathological than anatomical entity. Its inoculation causes tuberculosis, and repeated cultivations of it increase its virulence. This true tuberculosis occurs in man and the domestic animals, and may be communicated by food as well as by blood inoculation.

These views are confirmed by experiments of M. Hippolyte Martin, who is inclined to the opinion that the active tuberculous principle is a parasite.

SMALL-POX, according to the latest reports, is decreasing. It has nearly disappeared from Illinois.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 11, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 4, 1882.	2	7	229	10	197	107	44	0
March 11, 1882.	7	5	205	3	191	106	36	0

AN ACT TO AMEND CHAPTER 746 OF THE LAWS OF 1872, entitled, "An act relating to the examination of candidates for the degree of Doctor of Medicine." Section 1. Section one so that it will read as follows: Section 1. The Regents of the University of the State of New York shall appoint one or more boards of examiners in medicine, each board to consist of not less than seven members, who shall have been licensed to practise physic and surgery in this State; and all persons desiring to practise physic or surgery after the passage of this act, must submit to the examination hereinafter prescribed and obtain the diploma hereinafter provided before entering upon the practice of physic or surgery in this State.

AN ACT TO REGULATE THE LICENSING OF PHYSICIANS AND SURGEONS. The people of the State of New York, represented in Senate and Assembly do enact as follows:

SECTION 1.—No person shall practise physic or surgery within this State unless he is twenty-one years of age and has been heretofore legally authorized and duly qualified so to do, pursuant to the provisions of Chapter 513 of the Laws of 1880, and Chapter 186 of the Laws of 1881, or shall be hereafter authorized so to do by the subsequent sections of this act.

SEC. 2.—Every person who has not heretofore been legally authorized and duly qualified to practise physic or surgery as aforesaid, shall, before practising physic or surgery within this State, be examined as prescribed by the laws of this State.

SEC. 3.—To entitle any person to practise physic and surgery within this State, excepting such as have heretofore lawfully registered in pursuance of the provisions of Chapter 513 of the Laws of 1880, and Chapter 186 of the Laws of 1881, he or she shall, and every person hereafter complying with section 2 of this act, shall, before commencing to practise physic and surgery register in the Clerk's office of the county where he or she intends to practise physic and surgery in a book to be kept by said Clerk, his or her name, residence, and place of birth, together with the date of the diploma as conferred by the Regents of the University of the State of New York, and shall subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of the State, an affidavit containing a plain statement of all such facts as aforesaid, together with the name of the degree conferred by said diploma, and the fact that he or she is over twenty-one years of age, and the County Clerk shall receive a fee of twenty-five cents for such registration, to be paid by the person so registering.

Sec. 4.—A person who shall wilfully swear falsely to any statement contained in the affidavit required by section 3 of this act, shall be deemed to be guilty of and subject to conviction and punishment for perjury; and a person who violates any of the other provisions of this act, or who shall practise physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction thereof, shall be punished by a fine of not less than $250, nor more than $500 for the first offence, and for each subsequent offence by a fine as aforesaid, and by imprisonment for not less than thirty days, nor more than six months. The fine when collected shall be paid the one half to the person or corporation making the complaint, the other half into the County Treasury.

Sec. 5.—For the purposes of this act the words "practise physic and surgery" shall mean to prefix to one's name the word "Doctor," or the abbreviation "Dr.," meaning thereby Doctor of Medicine, or to annex the letters "M.D." thereto or to suggest, recommend, prescribe, employ, use or direct for the use of any person, any drug, medicine, appliance, apparatus, or other agency, whether material or immaterial, for the treatment, cure, relief, or palliation of any real or supposed ailment or disease of the mind or body, or for the treatment, cure, or relief of any wound, fracture, or other bodily injury, or any bodily deformity.

Sec. 6.—Nothing in this act contained shall apply to commissioned medical officers of the United States Army or Navy, or of the United States Marine Hospital Service, or to members of the House Staff of any Hospital during their terms of service.

Sec. 7.—So much of Chapter 513 of the Laws of 1880, Chapter 186 of the Laws of 1881, and all other acts and parts of acts as are inconsistent with the provisions of this act are hereby repealed.

Electrolysis in Enlarged Prostate.—Dr. A. A. Hoehling, Surgeon U. S. Navy, U. S. Naval Dispensary, Washington, D. C., writes: "I would like to suggest to our electro-therapeutists the trial of electrolysis in enlarged prostate. This is such a common condition after the age of fifty, and so difficult to relieve with our present modes of treatment, that anything which holds out some promise ought to have a judicious trial. In order that such trial may begin under the most favorable auspices, I publish this suggestion for the information of those best qualified to make it, rather than undertake it with my limited experience in electro-therapeutics."

Is Castration Warrantable in Spurious Hermaphroditism?—Dr. E. P. Bennett, of Danbury, Conn., sends us the following interesting and suggestive communication: "There perhaps has never been a true case of hermaphroditism found in the human subject, but there is a peculiar deformity which, among the ignorant, is considered as such. Two cases of this kind have occurred in my own practice. Both children were considered females, and baptized as such. In one of these cases, my son, Dr. William C. Bennett, was called upon to visit a sick girl, as they said, and during his visit the mother had occasion to change the child's diaper, and, although at first sight the genitals of the child appeared as those of a female, yet from some peculiarity he suspected that it was not a female. We then together visited it, and, upon examination, we found an ununited scrotum, and in the sulcus, between the two halves, was the opening of the urethra, and in each labia was found a testicle. The penis was about the size of a small goose-quill, without any prepuce and unperforate. The second case was a complete duplicate of the first. Now, I do not report this case as anything strange, as most works on surgery treat of them, but it is to another aspect of the case to which I wish to call the attention of the profession, and seek their advice. One of these mothers, after I had explained the case to her, wished me to remove the testes, and for, as I thought, good and substantial reason. She said to me, 'This child can never develop into a man or a woman. He will have the passions of a man without being able to gratify them; therefore, if castrated he will not have this to contend with. Again, the removal of the testicles will prevent the growth of a beard and whiskers, and I can rear it as a female, and the deformity will never be discovered, as it certainly would be if reared as a boy, as he would always have to sit down to urinate, and other little boys would soon discover his deformity, and call him hermaphroditic, to his shame and annoyance.' Now, the question is: Would not this have been the better course under the circumstances? In my opinion it would, but I told the mother I did not know that I had a legal right to do so. I then lost sight of the case."

The Celebrated Anatomist Hyrtl was once busily engaged in dissecting in the anatomical rooms of the Vienna Hospital. A guard of military police came into the neighboring court upon which the windows of Hyrtl's rooms looked. They began to go through their evolutions, when Hyrtl threw open the window in a rage and cried out, "Withdraw, you slaves: disturb not with your fanfarade the quiet of the dead."

The Jefferson Medical College is the title of the last new college in Louisville, Ky. It is a spring and summer school, giving a complete and graduating course. The Faculty consists of teachers from the other local schools. There is another spring school in that city—the Kentucky School of Medicine; five colleges in all, three in winter and two in summer.

Writer's Cramp.—Mr. Wolff, a German teacher of writing, has gained a wide continental reputation for his treatment of writer's cramp. He is endorsed by such authorities as Nussbaum, Bamberger, Charcot, and others. His method consists in methodical use of massage and gymnastics. He makes his patients execute definite movements many times a day, and in addition he extends the spasmodic muscles several hundred times daily. He attains success within two or three weeks, if at all.

Unintoxicating Wines.—Dr. Norman Kerr describes eight varieties of pure and unintoxicating wines which have been recently introduced into England. Among these are "Muscat," "Lachryma Christi," "Bordeaux," and "Congress." This latter is an American wine, and when fermented is sold as "American port." The wines in question have a pleasant flavor, and considerable nutritive and hygienic value.

The Metric System in Commerce.—A bill has been favorably reported from the House Committee on Coinage, Weights, and Measures, providing that the ad quantum duties upon all articles imported from foreign countries which are invoiced according to the weights and measures of the metric system shall be levied, collected, and paid at rates appropriate to the weights and measures of that system.

Sanitary Condition of the White House.—In a report on the sanitary condition of the White House, Colonel G. E. Waring comes to several conclusions, most of them being rather theoretical than demonstrated. He says: "The house stands on the summit of a gently sloping hill, of which the soil is of an extremely porous character. It is beyond question that from the leakage of the fountain basin and of the water-pipes, drains, and sewers, by which the house is surrounded, the soil under the building is in a state of more or less complete saturation—a saturation not entirely due to clear water. Some of the water-drains, and especially the main sewer under the centre of the building, have been leaking foul matter for many years. This heavy, saturated soil bears not only the foundation wall of the building, but the very floor itself of the basement story. It is recommended as a most important sanitary measure that the whole structure be supported on piers and groined arches of the best construction to secure a complete circulation between the ground and the building."

Another presumably bad element is said to be the "Kidwell Flats," which are, however, below and at some distance from the White House.

Prismatic Mirror for Rhinoscopic Examination.—At the meeting of the Société de Biologie, on the 8th of December, M. Gellé presented a prismatic mirror for rhinoscopic examination, which has the advantage of presenting the image in the true proportions, and not distorted, as in the plain mirror. It is also extremely easy to introduce, and gives a very distinct and well-defined image.

Professor Rollet.—The dignity of State Chancellor has been conferred by the Emperor of Austria on Dr. Alexander Rollet, Professor of Physiology in the University of Gratz, in recognition of his long services in the cause of science.

Robert Bridges, M.D., Emeritus Professor of Chemistry in the Philadelphia College of Pharmacy, and one of its trustees, died at his residence in Philadelphia, February 20, 1882, near the close of his seventy-sixth year.

French House-Surgeons seem to be particularly unfortunate. The interne at the French Foundling Hospital recently died of diphtheria, and the interne of the Small-pox Hospital at Nantes died from small-pox, contracted in discharge of duty.

A Successful Gastrotomy was recently performed by Mr. Paul Swain, of Plymouth, England, on a woman suffering from malignant stricture of the œsophagus.

The Prizes of the Paris Academy of Sciences.—The Paris Academy of Sciences has conferred on Prof. Brown-Séquard the distinguished honor of the Grand Prix Leeaze. This prize, which is of the value of 10,000 francs, is only given in recognition of a life-long devotion to physiological science which has resulted in important discoveries. The previous recipients have been Chauveau, Marey, and Dareste.

The Academy has also given the Montyon Prize to Dr. Bérenger-Féraud for his two works, entitled, "The Yellow Fever in Martinique" and "The Diseases of Europeans in the Antilles." A second prize was given to Dr. Favre for his researches upon Daltonism, and a third prize to M. Toussaint for his experiments relative to preventive inoculations.

The Bréant Prize was given to M. Léon Colin for his treatise on "Epidemic Maladies." The Godard Prize to M. Dubar for his memoir on "Tuberculous Affections of the Mamma."

The Serres Prize was given to M. Edouard van Beneden, Professor of Physiology in the University of Liege, for his work on "Embryology."

The Lallemand Prize to Dr. Luys for his treatise on "Mental Diseases."

The Physiological Prize to M. d'Arsonval for his researches in local temperatures.

It is noticeable that of nine prizes given, four were bestowed on account of physiological researches.

Pictorial Averages of the Physiognomy of Disease.—Mr. Francis Galton and Dr. Mahomed have for some time been engaged in making composite pictures of different diseases, but especially of phthisis. The process consists in throwing a succession of images of portraits of different persons on the same sensitized plate, and in thus obtaining a pictorial average. Great care has to be taken in the process.

The Detection of Lead Bullets by the Induction Balance has been attempted again, but the instrument proved to be a failure.

The Garfield Memorial Hospital.—A bill to incorporate this proposed hospital has been introduced into the House of Representatives, but it unexpectedly met with some opposition, and the bill has had to be put in order on the calendar. It will, therefore, not be reached for a long time.

Chronic Tonsillitis.—Davis A. Hogue, M.D., Houtzdale, Pa., writes: "I have successfully treated several children, where excision was impossible, by the use of a prescription from the clinic of the late lamented Prof. James Aitken Meigs, viz.: ℞. Chromic acid, 20 grs.; aquæ, 1 oz. M. Sig.—Apply to the tonsils by means of a camel's hair pencil. I have found it successful even when the thickening was very great."—*Med. Brief.*

The Fourth International Congress of Hygiene will meet at Geneva, September 4th to September 9, 1882.

A Recent Investigation of the State Asylum for Insane Emigrants on Ward's Island, which is one of the institutions under the supervision of the State Commissioner in Lunacy, revealed a very anomalous condition of affairs. It seems that the investigation was the result of an intestine disturbance, the matron intriguing against the asylum physician, who had reprimanded some of her favorites for neglect of duty. In this instance, fortunately, the dictates of humanity and common sense triumphed over the political influences which have so often defeated the true purposes of similar investigations; the physician was sustained, and the matron dismissed. The worst feature exposed was the fact that a relative of one of the officials had had the key of the female wards, paid frequent nightly visits, and that this privilege culminated in the adoption of the "increase and multiply" principle on the part of several of the irresponsible patients.—*Journal of Neurology and Psychiatry.*

Death of Dr. Joseph Pancoast.—The profession will learn with regret of the death of the veteran surgeon Dr. Pancoast. He died of pneumonia, at his residence in Philadelphia, on March 7th.

He was born in Burlington County, N. J., in 1805. At the age of twenty-three he was graduated from the medical department of the University of Penn-

sylvania, and at once began practice, adopting surgery as his specialty. Three years later he was teaching practical anatomy and surgery, obtaining prominence by publishing an annotated edition of Lobstein's "Treatise on the Structure, Functions, and Diseases of the Human Sympathetic Nerve," having himself translated the work from the Latin. In 1834 the Brockley Hospital, Philadelphia, elected him to its board of physicians, and he was soon called to the medical management of the Children's Hospital connected with that institution. In 1844 he published his "Treatise on Operative Surgery," a work which soon passed to a third edition, when he enlarged and revised it. In nine years nearly a half million copies of the book were sold, and it became an accepted authority. Prior to the publication of this volume Dr. Pancoast had been elected Professor of Surgery in the Jefferson Medical College. In 1854 he was prevailed upon to become one of the active surgeons of the Philadelphia Hospital, a position he filled for ten years. Previous to the acceptance of this work he had been elected Professor of Anatomy in Jefferson Medical College, which post he retained, in conjunction with his other duties, until 1874.

There seemed to be no limit to his capability for hard work. During his constant connection with the medical schools and hospitals of Philadelphia he gave close attention to an extensive private practice and devoted much time to authorship. Among his published volumes were his revised and remodelled edition of "A System of Anatomy for the Use of Students," by Dr. Caspar Wistar and Professor W. E. Horner. He editorially supervised "Menec on the Great Sympathetic Nerve," and the "Cerebro-Spinal System in Man," by the same author. Subsequently he brought out Quain's "Anatomical Plates." His contributions became marked features of prominent medical journals, and he gave to the public various monographs, both pathological and surgical, and made known many original operations in the department of plastic surgery. His introductory lectures to his college classes were prepared with great care. A number of them were collected and published as "Essays and Lectures." Another similar volume was called "Professional Glimpses Abroad." He was a member of the American Philosophical Society, of the Philadelphia College of Pharmacy, and many scientific institutions. He was also prominent in the Philadelphia County Medical Society and the Medical Society of Pennsylvania.

Hypertrophied Tonsils are treated very successfully and safely with the galvano-cautery, by M. Krishaber, who reports more than forty cases. The operation is without pain.

Periarchitis?—Dr. Geo. A. Harding, of Sault Ste. Marie, Mich., sends us the account of a case with the history of an iliac abscess, which he ascribes to an inflammation of the connective tissue about the rectum (periarchitis). The patient was a vigorous Irish laborer, aged eighteen, who had been complaining of severe pains in the back for several days. He had otherwise been well. He was suddenly taken with a chill, fever, vomiting, tympanitis, and pain on evacuation. There was tympanitis, swelling, and tenderness in the hypogastric region, but more on the left side. By using a hypodermic needle at this point, a sero-purulent fluid was obtained. On the same day he drew half a pint of this fluid from the region referred to by means of an aspirator. The next day the symptoms had improved. The aspirator was used again. The succeeding history is as follows: On December 4th, two days later, "Adhesions having formed between the walls of pus sac and abdomen at the point of introduction of aspirator needle, I used a trocar, and through its canula had no difficulty in completely emptying the sac and cleansing the cavity with a five per cent. solution of carbolic acid. December 6th. Repeated operation with trochar, obtaining a much less quantity of pus and less offensive. Again, December 8th, with increased improvement, but still the pus-sac refilled, and, the adhesions having extended by the irritation of the repeated operations, I deemed it safe now to enlarge the opening. Accordingly, on December 11th, I introduced a probe-pointed bistoury through the opening made by the trocar, and, cutting longitudinally in both directions, enlarged it to the border of adhesions, about one-half inch, thus accomplishing, what was so much needed, constant drainage. Then pushing a tent of cloth, carbolated, to the bottom of cavity, fully four and one-half inches, I again left it. From this time the only treatment was cleansing cavity, and changing tent daily, till December 29th, when the external opening was cauterized and left to heal, which it did, the patient becoming entirely well. Taking everything into consideration, pressure on bladder, pain caused in vicinity of abscess by defecation, position of tumor, and the direction of probe (introduced downward and to the left), together with depth of sac, it goes far to place the origin in the cellular tissue adjacent to the upper portion of the rectum (?). I was also unable to trace any cause, unless it was an injury unconsciously received while plowing, as that was heavy work, it being new land, for a boy of that age.

Vaccination Pamphlets.—The State Board of Health of New Hampshire has adopted the excellent plan of circulating a small pamphlet, giving briefly the facts about vaccination and protection from small-pox.

Circumcision and a Contracted Meatus.—It is stated in "Holmes' Surgery" that ninety-five per cent. of young male adults of the Jewish race have contracted urinary openings. The cause of this is supposed to be the universal practice of circumcision among the Jews. A contracted meatus is of frequent occurrence among Americans, and in our experience, is met with as frequently among those who have a long prepuce as among those who have been circumcised.—*Northwestern Lancet.*

A Bill to Establish Local Boards of Health in Wisconsin is before the Legislature.

Major John H. Frantz, Surgeon United States Army, died suddenly at his residence in Baltimore, March 2, 1882.

Obligatory Vaccination of infants has just been adopted by the Swiss Government.

The Kentucky State Medical Society will hold its next annual meeting in the Academy rooms of the Polytechnic Society of Kentucky, on the first Wednesday in April.

The Detroit Clinic announces itself as the only weekly medical journal in the Northwest, contains eight pages of reading matter, and is a promising looking periodical. Edited by Drs. H. O. Walker and O. W. Owen, of Detroit, Mich.

Original Communications.

ON THE VALUE OF IODOFORM AS A DRESSING FOR WOUNDS.

By H. B. SANDS, M.D.,

SURGEON TO THE ROOSEVELT HOSPITAL, N. Y.

In Germany, during the past year, iodoform has been extensively employed in the treatment of operation-wounds; and perhaps no other antiseptic has ever grown so rapidly in popular favor. Indeed, so manifest were many of the advantages attending its employment, that it seemed likely to create a revolution in surgical practice. Quite recently, however, numerous cases of poisoning from iodoform have come to light; and the acclamation with which it was received when introduced a little more than a year ago, may possibly soon be followed by an equally emphatic condemnation. Having shared the enthusiasm in favor of the remedy, and having also verified the danger accompanying its use, I venture to briefly record the results of my experience, as a slight contribution to the knowledge required to enable us to estimate the real value of iodoform as a surgical dressing.

The chemical, physiological, antiseptic, and toxic properties of iodoform have been minutely investigated by German observers. It contains ninety-six per cent. of iodine, is easily soluble in ether, and in both the fixed and essential oils; while alcohol is a more feeble solvent, and water dissolves only a trace of it. When in solution, it undergoes gradual decomposition, evolving iodine, to which its antiseptic properties are believed to be due. When, therefore, a wounded surface is covered with iodoform, a kind of antiseptic reservoir is established which, constantly and slowly giving off iodine in a nascent state, effectually hinders putrefactive changes in the wound. The development of bacteria is not always entirely prevented, but all other evidences of putrefaction are absent, and the wound remains wholly aseptic. It has been shown, however, that the action of iodoform – owing to its slight solubility in water and in the animal fluids—although constant, is slow, contrasting, in this respect, with the quick and energetic action of carbolic acid. Consequently it cannot be substituted for the latter in the disinfection of instruments, sponges, or the hands of the operator. Moreover, in the case of wounds intended to be closed, with the view of obtaining union by the first intention, carbolic acid, as a direct application to the cut surfaces, is preferable to iodoform, both for the reason above mentioned, and because the presence of the powder between the opposed surfaces interferes with primary adhesion.

The favorable local influence of iodoform, when applied to open wounds, has been noticed by all surgeons who have employed it. The wound remains free from pain, the discharge is thin and scanty, the surrounding integument free from inflammatory swelling, and the formation of healthy granulations goes on rapidly and without interruption. The iodoform disappearing very slowly, infrequent dressings are sufficient; and until the reparative process is far advanced no change of treatment is rendered necessary. When, however, granulation is well established, and the wound has contracted in size, other applications are preferable to iodoform, which, perhaps, somewhat retards cicatrization. In the management of ordinary open wounds, its superiority to carbolic acid depends mainly on the fact that while the direct contact of the latter causes irritation and suppuration, iodoform has an opposite effect, restraining inflammation, and promoting the work of repair.

Iodoform is also employed with advantage in certain situations where the use of carbolic acid would be either uncertain or dangerous—after operations on the rectum, such as the extirpation of cancerous growths, the difficulty of maintaining an aseptic condition of the wound by means of carbolic acid solutions is often insuperable, while a few applications of iodoform usually accomplishes this object with certainty and ease. Again, after operations for the removal of cancerous tumors of the tongue, the tonsils, the jaws, or the floor of the mouth, disinfection of the wound, although extremely desirable, cannot be safely obtained by carbolic acid, on account of its poisonous properties; consequently the wound often becomes exceedingly offensive, and the patient is exposed to the double risk of septicæmia by direct absorption of septic products, and of becoming contaminated by inhaling or swallowing the putrescent fluid so abundantly secreted. In these cases iodoform has been used with signal success. The operation-wound being plugged with a strip of gauze, impregnated with this substance, remains aseptic, and frequent removal of the dressing is unnecessary. Twelve consecutive amputations of the tongue were lately treated in this manner in Billroth's clinique, without a fatal result. Most of these operations were severe and extensive, involving a removal of the floor of the mouth.

Iodoform has long been known as a valuable remedy when applied to unhealthy and fetid ulcers; and its excellence in this respect has been confirmed by recent observation. I have repeatedly employed it during the past six months with the happiest effect in this class of cases, and have been surprised to notice how quickly the ulcers became inoffensive and covered with florid, healthy granulations.

In treating open wounds with iodoform I have followed the usual practice of covering the surface with a thin layer of the powder, dusted from a pepper-box, afterward applying a layer of cheese-cloth, a coat of absorbent cotton, a piece of gutta-percha tissue, and a bandage. In operation-wounds intended to be closed with the object of obtaining union by adhesion, I have simply washed the wound with a solution of carbolic acid, and after uniting the edges with sutures, with or without the insertion of a drainage-tube, have covered the surface with half a dozen layers of cheese-cloth, lightly dusted with powdered iodoform, over which were applied a mass of salicylated or absorbent cotton, a piece of gutta-percha tissue, and a gauze bandage. The dressings were usually renewed on the second or the third day, and afterward at longer or shorter intervals, according to circumstances. As a rule, the results have been entirely satisfactory, extensive amputation-wounds uniting almost completely by the first intention, and invariably remaining aseptic.

Among the larger operation-wounds I have treated with iodoform during the past few months, in hospital and in private practice, are cases of strangulated hernia, trephining for fracture of the skull, colotomy, enterotomy, castration, ligature of the external carotid for aneurism of the posterior auricular artery, perinephritic abscess, enucleation of suppurating inguinal glands, excision of the breast, removal

of tumors of the neck, amputation of the leg, and amputation of the thigh. Of three cases of the latter operation, one was a primary amputation for injury, and two were performed for disease. Prompt recovery from these operations followed in every instance, except three. One was a case of lumbar colotomy, which will be described hereafter. Another was a case in which the operation of castration was followed by consecutive hemorrhage, rendering it necessary to reopen the wound, which was not quite healed when the patient left the hospital. The third case, still in progress, was that of a woman from whom I removed a large myxomatous tumor, situated in the parotid region. Erysipelas set in on the fourth day, and is now apparently subsiding on the tenth day.

Besides the larger operation-wounds, I have treated with iodoform a great number of smaller wounds, and several cases of compound fracture, with gratifying success. The remedy is easily applied; its antiseptic action is efficient, and its local action, unlike that of carbolic acid, is sedative and unirritating, even when directly in contact with a raw surface. Moreover, in endeavoring to procure union by the first intention, better coaptatiou can be secured by the even pressure of the cotton pads, than by the application of carbolized gauze, thereby favoring the chances of adhesion of the cut surfaces. I know of no other antiseptic dressing which is at the same time so comfortable and so efficient, and were it not for one drawback, I believe that it would soon be almost universally adopted.

That iodoform possesses poisonous properties has long been known by experimental physiologists. Binz and Högyes have shown that when administered in large doses to dogs or cats, it causes narcotism, and destroys life by paralysing the nerve-centres of respiration and circulation. In animals thus destroyed, the heart, liver, and kidneys have been found in a state of fatty degeneration. Similar effects have unfortunately been recently observed in the human subject, as the result of absorption of iodoform by wounded surfaces. It is remarkable that for some time after its introduction into general surgical practice, very few instances of its injurious action were observed, and that in the experience of some surgeons, poisoning is extremely rare. Hoeftmun reports that out of a thousand cases treated by iodoform in the hospital in Königsberg, only two were thus affected, both, however, terminating fatally. With other observers, bad results have been more frequent, and various degrees of toxic action have been recorded. Attention having been directed to the dangers attending the use of the remedy, cases are rapidly multiplying to prove that it cannot be freely employed without the risk of fatal consequences.

In man, as in animals, poisonous doses of iodoform cause rapid and feeble heart-action, coma, and paralysis of the organs of respiration. Autopsies have demonstrated in such cases the lesions of meningitis and fatty degeneration of the heart, liver, and kidneys. But the most remarkable manifestations of poisoning in the human subject are due to perverted cerebral action, taking the form of mental derangement. Every degree of intoxication has been observed, from simple exaggeration of nervous excitability to the condition of acute mania. In the lighter cases patients are restless and uncomfortable, complaining of headache, loss of appetite, wakefulness, and the constant taste of iodoform. Such symptoms often, but not always, precede those which are met with in bad cases, which are nearly identical with the symptoms of delirium tremens. Profound mental despondency, inability to eat or sleep, spectral illusions, delirium more or less violent, and suicidal propensities, are the most frequent manifestations of the morbid state. Sometimes the patient is noisy and abusive, at other times his actions are stealthy and he will endeavor to run from his bedroom or jump out of a window in order to escape from a fancied enemy. From such a condition many persons recover, while others die, often suddenly, from exhaustion or coma. No antidote to the poison has been discovered, and the only treatment of any avail is that of preventing further intoxication, and supporting the patient's vital powers by alcoholic stimulants until the crisis is past. Opium and bromide of potassium, even in large doses, usually fail to induce sleep, while chloral hydrate would be likely to paralyze the heart, already enfeebled.

I have observed several examples of the lighter form of iodoform poisoning in which the symptoms disappeared almost immediately after discontinuing the use of the drug.

I have seen also two cases of acute mania, due to this cause, and, until the second case occurred, I failed to appreciate the nature of the morbid state, as I was unaware that this form of disease could be produced by iodoform.

The first case was that of a woman, aged thirty-six, on whom I performed lumbar colotomy at the Roosevelt Hospital four months ago for the relief of intestinal obstruction dependent on cancerous stricture of the rectum. The operation was unattended with any accident, and after inserting a drainage-tube at each angle of the wound, and closing it with button-sutures, an iodoform gauze dressing was applied. The wound failed to unite in its deeper part and reopened at the extremities. Iodoform was freely applied to the granulating surfaces, the gauze dressing being continued. The mechanical relief afforded by the operation was satisfactory, and the patient did well until about the eighth day, when she became despondent, somewhat sullen, and wakeful at night. She was suspected of being addicted to the use of opium, and morphia was administered in the hope of controlling the nervous symptoms. No good effect followed its use. Meanwhile the patient slept but little, refused food, began to lose flesh, and a fortnight after the operation showed unmistakable signs of mania. She was seen putting her fingers in the wound, and immediately afterward in her mouth. She became melancholy and suspicious, and occasionally violent and abusive, attempting to strike the nurse or the physician. After a paroxysm of rage, she died suddenly, eighteen days after operation. At the time of death the body was greatly emaciated. During her fatal illness the pulse was accelerated, but the temperature never rose above 100°.

The second case was that of a lady, about fifty years of age, from whom I removed the left breast and axillary glands for carcinoma. The wound was closed after inserting drainage-tubes which were removed on the fifth day. Moderate suppuration occurred, but the wound healed rapidly, and was nearly closed at the end of a fortnight. During this period, iodoform-gauze dressings were applied, being removed every day, or every second day, according to the amount of discharge. The patient was a woman of nervous temperament, who had been very apprehensive regarding the danger of the operation, but who had never suffered from any mental dis-

order. On the fourth day she began to be restless and hysterical, and required opium to induce sleep. A few days later she became very despondent, thought she was going to die, and insisted on making her will. On the tenth day the evidences of mania were very plain, delirium, hallucinations, fear of those around her, attempts to run away, sleeplessness, and absolute aversion to food being among the chief symptoms. Copious sweatings were also noticed, and muscular weakness, except during paroxysms of excitement. The pulse was weak and rapid, varying in frequency from 100 to 120. The temperature was generally normal, and never exceeded 100⅖°. At the end of the second week, the wound being nearly healed, the use of iodoform was discontinued, and from that time the patient began to improve, her recovery being complete about ten days later.

Besides the two cases just described, in which I think there can be no doubt as to the poisonous effects of iodoform, I have met with another case which was marked by mild maniacal excitement, after an operation for necrosis of the femur, in which iodoform was freely and repeatedly applied to an open wound. But, as the patient had previously exhibited signs of mental derangement, I could not with certainty determine the agency of iodoform in causing the symptoms observed after operation.

Thus far it has not been ascertained definitely what amount of iodoform is necessary to cause poisoning, and the susceptibility to its action appears to vary greatly in different cases. In many instances iodoform has been freely applied to extensive open wounds with impunity, two or three ounces having been inserted into the wound immediately after an operation. In other cases, slight nervous symptoms have followed the application of a single gramme, while severe attacks of mania have been caused by doses of half an ounce and upward. In many of the German cases an excessive amount was employed, sometimes amounting to five or six ounces. The toxic effect depends much upon the extent of the absorbing surface, and a fresh wound will absorb more rapidly than one that is granulating. Old persons are especially liable to suffer from iodoform poisoning, while such is not the case with children, as far as can be inferred from the limited statistics thus far published. The subject of iodoform-poisoning is one of deep interest, and it is to be hoped that surgeons will promptly record the results of their investigations. It is already apparent that the sanguine expectations at first entertained regarding the value of this antiseptic cannot be fully realized, and that, in the present state of our knowledge, iodoform should be employed with great caution, and in such a manner that it can be readily removed from the wound in case the symptoms of poisoning should supervene. It is certainly hazardous to fill a large fresh wound with the powder, which may penetrate the meshes of the connective tissue so that it cannot be washed out. By employing it in the minimum quantity that will produce the desired effect, and by learning, perhaps, to recognize beforehand the class of cases that are peculiarly susceptible to its deleterious influence, we may yet be enabled to use with safety this antiseptic, which, in many respects, is the most valuable that has ever been introduced into surgical practice.

Chinolin, the new drug which it has been attempted to introduce as an antipyretic, is not a success.

A CONVENIENT METHOD OF DOSAGE AND ADMINISTRATION.

The Process of making Tablets of Simple and Compound Powders, including Triturations, Hypodermics, etc.*

By ROBERT M. FULLER, M.D.,

NEW YORK.

Mr. President and Fellows of the Materia Medica Society: Pharmaceutical chemists have, of late years, attained a great advancement in the production and combination of medical substances, and in the methods of dispensing them. All methods, of whatever class, should be properly limited to that field where they would be found of the most practical utility, and though of the various processes used in pharmaceutical work generally, much of interest might be written, it is simply my purpose to treat only of a few which are best adapted to the dispensing of medicine suitable for the troche or tablet in an uncoated form.

In the preparation of the substance for the troche, or tablet, the pharmacist usually resorts to the process of cutting the paste, or of compressing dry or moist powder, in weighed or measured portions, with dies of various sizes and shapes. The cutting of the paste has been found to be generally impracticable for pharmaceutical purposes, but the process of compression, on the other hand, has been deserving of commendation for the facility it affords for the preparation of medicines in a convenient and elegant form.

During the past three years, however, prominent pharmacists have, by experience, fully demonstrated that there was room for another method of securing simplicity and palatability in the preparation and administration of dose medicine.

The method in question, which assures the same accurate result as is obtained by the process of compression, was the outcome of a long series of experiments made in this line as early as 1861, and before the system of compression was generally known or adopted in this country.

The system employed in this simplified method does not comprehend merely the accurate dosage and agreeable administration of medicines, it also embraces their preparation in large quantities with great facility by simple and comparatively inexpensive apparatus, which is now made by machinery with great exactness and beauty of finish.

It is this particular feature which especially recommends the method to pharmacists who desire to secure accuracy of result by simple and readily available apparatus. The basis of these experiments, and the idea which inspired the many tests made, was a belief that the then prevailing domestic custom of medicating fragments of ordinary loaf cane-sugar could be improved by the substitution therefor of a lozenge-shaped, or other equally convenient tablet that would possess similar porosity and firmness.

Such a tablet was finally secured by moistening pulverized cane-sugar into a paste of suitable consistence, with the aid of alcohol or water. The mass was next formed into any shape desired by a mould and, when sufficiently firm to allow of the operation, was removed, and allowed to dry and harden.

---

* Read before the New York Materia Medica Society, February 23, 1882.

Thus prepared, the tablet* was found to be as thoroughly absorbent and adaptable to medication by saturation as were the cane-sugar fragments formerly used. Any other similar inert substance, whether it be a simple or compound powder, might have been, and may be used in place of cane-sugar, if desired. Tests made to determine the absorbent quality of this tablet blank (or saturate), with a view of ascertaining the extent of its utility, demonstrated that a large number of standard concentrated solutions, or liquids, the dose of which was small, could readily and accurately be administered in this manner.

The tablets may be made of any *size* desired by the use of tablet-moulds of the requisite capacity. The moulds now made produce tablets varying in size from one-half grain to sixteen grains. Pipettes are employed in the medication and are made by Messrs. Caswell, Hazard & Co., Dr. E. R. Squibb, and others, in improved form of long and accurate register.

The field to which the tablet blank can be applied has been found to embrace a large number of standard and extemporaneous pharmaceutical preparations, such as fluid extracts, tinctures, and other concentrated solutions. Among this class are: Extr. fl.—aconiti radicis, belladonnæ rad., gelsemii, ipecacuanhæ, nucis vomicæ, veratri viridis, also tinct.—aconiti radicis, belladonnæ, cantharidis, capsici, ignatiæ, nucis vomicæ, veratri viridis; etc.

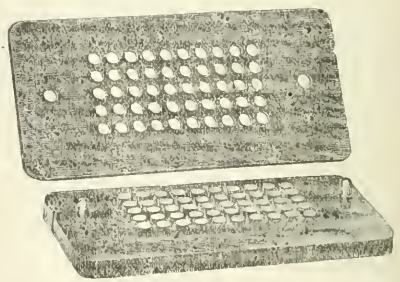
Having secured the porous tablet, experiments were next instituted to ascertain to what extent simple and compound powders could be similarly made, with alcohol or water, into a porous and adhesive mass that might be moulded in the same form.

This branch of inquiry was prompted by the evident facility with which certain pharmaceutical substances could be united, and their cohesive and adhesive properties utilized for the object in view. The idea of their adaptability for this purpose was the outgrowth of general laboratory practice in pharmacy and chemistry during 1861-64, at which period my attention was drawn particularly to the list of pharmaceutical agents embraced in Part iv. of the appendix to the "United States Dispensatory" of 1854, and subsequent editions. Special effort was directed toward determining the possible extent to which these agents could be thus employed. The result revealed the fact that a wide variety of medicines could be prepared for moulding in this manner, and thus there was opened up a new field for the practical operation of this process. The latter was employed in practice thereafter, as occasion arose, to secure certain desirable preparations that could not, at that time, be procured in any other way. It was found of advantage to make these tablets in such a manner, and of sufficient strength, to allow of their being readily subdivided into any required number of doses. By this means, there was secured in convenient form, what could not otherwise easily have been obtained short of an extensive variety of tablets of various dose capacity. Among them were a number that were particularly useful at the bedside, or in cases of emergency.

This method was described four years ago in a paper I then had the honor to read before the New York Academy of Medicine, but the field of its application was merely outlined. Reference was then made solely to the extensive utility of sugar-of-milk in the preparation of blanks, triturations, and in combination with various substances in the form of soluble tablets. My purpose this evening is to demonstrate with specimens, that though sugar-of-milk has always been found of extensive and general utility in tablet-making by this method, still the process is not by any means solely confined to the employment of this substance as an indispensable requisite to success. On the contrary, other medicinal substances may be employed if desired, and equally satisfactory results attained therewith.

Apparatus of a simple character sufficed for the moulding of the tablets, and there was employed in this branch of the work devices that were easily constructed by any one, and which generally speaking, were modifications of the simplest style of compressing apparatus now in use. The mechanism was usually of glass, although metal was sometimes used. It consisted of a tube into which was introduced one or two perfectly fitting cylinders as required.

As a rule the process was to hold in the left hand an adjustable cylinder, which had been inserted into the glass tube. The paste was then introduced with a spatula in the open end of the tube, and the



Tablet-making apparatus.

cylinder was so adjusted by hand, or with the aid of a screw register, that only so much of the paste as sufficed to contain the desired amount of medicine, could be moulded in the tube. This amount was accurately determined by weight, and the paste, after hardening, was pressed out in a tablet of perfect shape. Other moulds of various shapes were employed in casting a similar mass in other forms for special uses. Improvements were made from time to time in the tablet-making apparatus, and ultimately there was produced two styles of apparatus, the same general principle governing each, but leaving a wide margin for finish as regards workmanship. These styles were described at some length in a previous paper on the process heretofore published. They comprised the adjustable and non-adjustable moulds. The latter, illustrated as above, was fully and sufficiently described in the previous paper in question, and can be made in various sizes. The adjustable mould is the same in principle, with the addition of any device for accurate adjustment. These moulds are generally made of hard rubber. Glass has been successfully used for the upper plate,

* This is the blank fully described as the "tablet saturate" in the paper on "Dose Dispensing Simplified," published in THE MEDICAL RECORD of March 9, 1878.

and other hard substances may be employed if desired. Plates have been made of metal, containing perforations for 250 tablets; of hard rubber, containing 50 or 100 holes, which is the number usually employed; and of glass, containing 50 perforations.

The powders found in the appendix which could be prepared with the apparatus in the manner described embrace triturations, hypodermics, and other special preparations. The triturations were prepared in the manner elaborately and interestingly described in a text-book, used in connection with my earliest experiments, and entitled Mohr & Redwood's "Practical Pharmacy" and published in London in 1849. Additions are constantly being made to the list as experiments demonstrate the adaptability of other substances for moulding in this form. At the present time the list of tablets manufactured by prominent pharmacists include a large variety of trituration tablets. These firms now regularly use triturations for tablets made with a special scale which permits of the exact amount of medicine desired being introduced into the moulds. To be of service, hypodermic tablets should be so prepared that they will become readily soluble. This desired solubility may generally be secured by the employment of one or two suitably selected salts for a basis. Preparations combined in a manner to thus favor solubility are being made at the present time by Messrs. Caswell, Hazard & Co., of salts of atropia, morphia, pilocarpia, strychnia, and other substances.

Efforts were subsequently directed to the production of pill-masses and troche pastes into tablet form. These experiments likewise indicated that by modifying the adhesive properties of both the mass and paste, either could be adapted to the process without difficulty, and that the tablets could be made of the desired density or porosity. Fine preparations in troche form have recently been manufactured by Messrs. Fraser & Co. Among them is a troche of pulvis. conii comp., to which is added a required dose of codein. Pill masses have also been prepared in a very satisfactory manner by leading pharmacists. The specimens exhibited in connection with this paper include 296 varieties of preparation. They were made principally by pharmacists to whom had been explained and illustrated the method I have thus described, and who are now familiar with all its essential details, as well as with the character of the various styles of apparatus employed.

The experiments in their progress afforded me an interest which I can hardly hope to transfer to any description of them, either orally or through the medium of a written paper. I trust that they may, however, be found to possess sufficient merit in the results attained to pardon the imperfections in the method of presenting them to your attention, and I desire to thank you for your indulgence. In closing, I cannot permit this occasion to pass without expressing my gratitude to my friend, Dr. H. G. Piffard, and also to Messrs. Caswell, Hazard & Co., and the other pharmacists, with whom my relations have been of an agreeable nature, since the occasion when the method was first given to the profession, at the solicitation of some of its members.

The appended table indicates the variety of simple and compound pharmaceutical substances, shown in specimens, and which can be prepared by pharmacists generally, in accordance with the methods described. The tablets marked (*) are made from the triturations.

TABLETS.

*Acid arsenious.
" gallic.
" tannic.
*Aconitia.
Aconiti rad. ext. fl.
" " tinct.
*Aloin.
Ammonii muriat.
*Antimon. et potass. tartras.
*Atropia sulphas.
* " " (hypodermic).
Belladonnæ rad. ext. fl.
Caffeina.
*Cantharis.
Cantharidis tinct.
Capsicum.
Carbo ligni.
*Caulophyllin.
Cerii oxalas.
*Codeia.
*Conii. comp. pulvis.
* " " " c. codeia.
*Digitalia.
Ferri et quiniæ citr.
" " strychniæ citras.
" pyrophosphat.
*Ferrum redactum.
Gelsemii. ext. fl.
*Gelsemin.
*Helonin.
*Hydrarg. chlorid. corros.
* " " mite.
* " iodid. rubrum.
*Hydrarg. iodid. viride.
Hydrargyri pil. (U. S. P.)
*Hydrargyrum c. creta.
*Hyoscyamia.
*Ipecacuanha.
*Ipecacuanhæ et opii. pulv. sacch.
*Macrotin.
*Morphiæ sulphas.
* " " (hypodermic).
*Nux vomica.
*Opium.
*Pilocarpia.
* " (hypodermic).
*Podophyllin.
" comp. pil.
Potassii chloras.
Quiniæ sulphas.
" bisulphas.
*Santoninum.
Sacch. alb. (absorbent or porous blanks).
Sacch. lactis. (absorbent or porous blanks).
Sodii bicarbonas.
" boras.
*Strychniæ sulphas.
* " " (hypodermic).
*Veratria.
Veratri viridis ext. fl.
*Zinci. phosphidum.

136 WEST FORTY-SECOND STREET.

CASES OF MONOHYPOCHONDRIA AND MONOMANIA.

I.

By GEORGE M. BEARD, A.M., M. D.,
NEW YORK.

THE philosophic and thorough study of psychology along theoretical and practical lines—that is, by seeing many forms of mental disorder, light and severe, comparing them with themselves and with each other, and reasoning rightly from our observations—demonstrates these two facts which are of interest and of importance to physicians and to society:

First.—That there is a very large and increasing number of cases of mental impairment that often pass for insanity, but are not insanity. Many persons who are mentally sick, whose minds are disturbed through cerebral congestion or cerebral exhaustion, either of direct or of reflex origin, all the time or a portion of the time, periodic or intermittent, are called by their friends insane, are sometimes formally diagnosticated as cases of insanity by physicians, and, rarely, are admitted as insane to asylums. By any just theory, definition, or conception of insanity they cannot be called insane, and are not, probably, ever to be insane—are not on the road toward that class of cerebral disorder—but may, on the contrary, be saved from insanity by this lighter form of disease which is mistaken for it. A psychology that is scientific and philosophic does not, therefore, increase the amount of insanity in society, but diminishes, since it demonstrates the existence of a large class of cerebral disorders in which the mind is disturbed and responsibility weakened, without being seriously enough impaired to be called insane, either in a medical or legal sense.

It is in just this class of what I call *border-line cases*, in which the off-hand diagnosis of insanity is impulsively, or sometimes deliberately made, to the great misfortune of the patients and their friends, since it places them in a class to which they do not belong, giving them a reputation which society holds as undesirable, discourages treatment, and gives a prognosis far more gloomy than is required by the facts.

Although I call these border-line cases, since they are, or appear to be, on the border-line—on the no man's land that divides the sane from the insane—yet not often do they cross the border, or if they do make incursions into the realm of the crazy, they return again; but more frequently,—however near the border they may go—they do not actually cross it; they may think of suicide, talk of it, perhaps attempt it, but they do not commit it; they may think of murder, but they hurt no one; their morbid impulses and instincts never reach the limits of irresponsibility, or if they do, they do not pass the limit when it is beyond their power to control their environments; if they cannot resist when under temptation, they can at least deliver themselves from temptation; and so all their lives, severe as their sufferings may be, and peculiar and grotesque as many of their symptoms are liable to be, they yet do not absolutely lose the instinct of self-preservation, or the power of adapting themselves to their environment, nor do they relapse into childhood, nor do they lose, to a great degree, their rememberable consciousness. In short, they are sane, although they are sick in mind, with mental responsibility impaired, it is true, but not sufficiently impaired to class them with lunatics.

Nervous patients of this class are exceedingly interesting, scientifically; and a knowledge of their symptoms and the philosophy of their disease is of high importance, as well as of interest to themselves, to the profession, and to society.

Second.—There is a considerable class—also probably somewhat increasing—of monomaniacs, that is, chronically insane, with delusions of a more or less limited character, who, though they are not, usually, thought to be insane, either by their friends or by the profession, and are found out of, far more than in, asylums, managing, it may be, important business affairs, in places of not a little responsibility, laborious, successful, happy, and useful in society in many relations, are yet insane.

By any just theory, definition, or conception of insanity, their mental responsibility is seriously impaired in certain directions—their insanity co-exists with their sanity—in some cases, and under circumstances that arouse the disease, they may develop symptoms the most serious, and become suicides, thieves, or murderers. Insanity of this kind is consistent with almost perfect physical health, with brilliant and rare intellectual gifts, and with great mental activity and usefulness. In some cases this monomania may precede full mania; as the penumbra precedes the shadow, the monomaniac becomes the maniac, becomes demented, sinks to the state where both friends and enemies, the profession and the laity allow that he is insane. More often these cases remain for years, and even for a long life, monomaniacs, and they may die at last, not of the disease, but—as any one else would die—of fever, pneumonia, consumption, or of any acute or chronic disorder.

Between these monomaniacs and maniacs the difference is one of degree only: the distinctive fact of both forms of insanity being irresponsibility in some particular direction, or in many directions; both varieties—monomania and mania—are forms of partial insanity, as all insanity is partial insanity; the monomaniac differing from the maniac as the partial eclipse, a slight darkening of the sky, differs from a total eclipse with its twilight and chromosphere.*

The study of this class of patients is of interest to society and to the profession, for the two-fold reason that they are so often confounded with the first class, who are not insane, the border-line cases, and because, in a small percentage of cases, they commit crimes of severity and come into court and are tried for such crimes, as though they were perfectly responsible, and when tried, may be convicted unless, perchance, they have had the good fortune to be admitted to insane asylums.

When these cases enter a court they become a greater terror to judges and juries than to the victims of their crime. During the past century this has been, among English-speaking people especially, the exciting cause of a measureless quantity of judicial non-expertness in psychology.

These border-line cases—cases of *mono-hypochondria*—bear to cases that have crossed the line, the maniacs and monomaniacs, somewhat the same relation that cases of neurasthenia in women bear to hysteria; and the study of feminine neurasthenia and of hysteria is a valuable preparative to the study of mono-hypochondria and monomania.

Just as of old cases now known to be illustrations of neurasthenia, classed, studied, diagnosed, prognosed, and treated as such, were assigned to the realms of insanity, or ataxy, or general paresis, or spinal congestion, or cerebral congestion, or cerebral hemorrhage, or ataxy, or lateral sclerosis, or epilepsy, just so these cases of what we would call *mono-hypochondria*, with special and limited phases of morbid fear, mental impairment and diminution of responsibility, may have been classed as cranks, fools, or imbeciles, men who are not insane, any more than they are neurasthenics, or hysterics, or epileptics, and whose symptoms—important, interesting, and instructive as they may be—are yet never to lead, as a rule, to any form of insanity: any more than the cases of neurasthenia are to go on to epilepsy, or to any grave and incurable organic disease of the nervous system. Yet further our parallel will hold good, and it may be claimed—and observation will establish this claim—that, just as neurasthenia saves, sometimes, its victims from the graver diseases which it so well simulates, and for which it has been so often mistaken, so mono hypochondria—this special, limited, and comparatively mild form of mental impairment with slight diminution of responsibility—saves its victims from insanity, with which it is confounded, the lines of which it constantly threatens to cross, without ever carrying its threat into execution.

There is no danger of making too clear the differential diagnoses of mono-hypochondria and monomania; for in the best current psychological literature of the world—in France and even in Germany, where original science centres—cases of neurasthenia are classed as cases of insanity, referred to as such, described as such, and their prognosis and their treatment—if they have any—are based on this mistaken diagnosis.

* In my article on "The Case of Guiteau," in Journal of Nervous Diseases, January, 1882, I have discussed, more in detail, the subject of partial insanity.

The insane may have morbid fears, but morbid fears are not necessarily symptoms of insanity.

Thus Dr. H. Emminghaus in his "Allgemeine Psychopathologie," page 79, speaks of agorophobia as one of the symptoms of insanity as described by Westphal; Maudsley, in the last edition of "The Pathology of Mind," follows the German lead in this respect; also Dr. J. Weiss in his "Compendium der Psychiatrie," has a paper on fear, as one of the symptoms of insanity; speaking—among other phases of fear—of panphobia. At a meeting of the British Medical Association at Cork, in 1879, Prof. Ball of Paris, read a paper on claustraphobia—fear of narrow, *closed* places, the opposite of agorophobia, fear of *open* places—and regarded the symptom as indicative of insanity, or as leading to it. It is a fact of observation that fears of this kind, as I stated in the discussion at that time, and many other forms of fear that I have elsewhere described may exist in a very severe form indeed, in persons who are not at all insane; who may do business and acquire property; they may be very hard to relieve, and yet not be in any sense insane, and are never to become insane.

The London *Lancet*, in a late editorial, speaks of the confusion and complexity of this whole subject of insanity, especially in morbid fears, to which attention has been directed only of late. The editorial assumes that these morbid fears are phenomena of insanity.

No such disease as mild insanity.—No one can be a little crazy. Insanity, in its very nature, is a serious disease, and he who is not seriously sick cannot be insane. All insanity is partial insanity. There is, indeed, this side of death no total insanity, but all insanity, though it be partial, is serious insanity. Mild adjectives before insanity are contradictions. No man can be slightly crazy, as no one can have his leg a little broken. A fractured thigh, while it lasts, can never be otherwise than a serious trouble, since it makes its victim a physical cripple; so a fractured mind, while it lasts, can never be a trifle, since it puts its victim out of harmony with his environment and makes him a mental cripple.

As sprains and bruises are sometimes mistaken for broken limbs, so mono-hypochondria and neurasthenia are mistaken for insanity; and as sprains and bruises may be even more obstinate and protracted in their course than fracture, so mono-hypochondria and neurasthenia may, in some cases, require longer treatment than the far graver conditions of monomania.

The recital of a number of cases of mono-hypochondria, including some cases of general neurasthenia, on the one hand, and those of monomania on the other, gathered from my own experience, may help to make clear the differential diagnosis here presented better than extensive abstract reasoning.

I was consulted for a lady of great eloquence and persuasiveness, who had over-worked herself in philosophical and religious labors, especially in public speaking, which she took up suddenly, and with a certain dread, under the inspiration of conscience and without previous public experience. This unusual exertion, night after night and day after day, in lines of labor to which she was unaccustomed, brought her into a state of profound bloodlessness and nerve-bankruptcy.

The feature in this case to be noted is, however, that she thought and talked of suicide, and lost, or seemed to have lost, all hope both of this world and the next, and it was feared—and with reason—that she might attempt to commit suicide, which, I believe, she did not do.

I was able to keep watch of this case afterward through those who had charge of her, and I was convinced that, while she was near the border line, she did not cross it. Her mental responsibility was impaired, but not seriously. She could not have been called exactly insane, although she was, perhaps, so near to that condition as one could well be without becoming insane.

I saw in consultation, not long ago, a lady who was a sufferer to a most extraordinary degree from neuralgia, and who was at the same time afflicted with many neurasthenic symptoms; but the special feature of her case was not the neuralgia or the neurasthenia so much as the cerebral disturbances that appeared in the morning prior to a neuralgic attack. She would at that time, for a few hours or more, be very irritable, ugly, obstinate, and complaining, was dissatisfied with every thing that was done for her; her whole moral nature seemed changed for the time, so that a new person appeared on the scene. In this case there was a periodical attack of mental impairment; a loss of responsibility, but not a serious loss; she was nervous, but not insane. She was not mentally herself at these times, but she also was not a positive lunatic.

I had under care a lady with all the phases of neurasthenia conceivable, who has anthropophobia, or fear of man, in a tremendous extreme. She is more afraid of men, she says, than of wild animals. In passing up and down the street she would rather meet a lion than a human being, excepting only her husband and her parents and very near relatives.

She dreaded terribly to have me see her; and even after I had called upon her a number of times, still my visits were annoying to her, and were followed by exhaustion, and this fact became a very serious one in undertaking to treat her. Many times has her husband called upon me to say that his wife could not see me at the appointed hour; that there must be delay of a day or of several days, simply because she had not the courage to see any one. The simple presence of human beings, even although they did not speak to her or look at her, caused her great distress and weakened her. In this case there was impairment of mental control, the result of this brain bankruptcy, which showed itself in this fear of man; but by any theory, definition, or conception of insanity, she was not insane. She is a slave to her environment, but in a degree she can control her environment. She might be called a mono-hypochondriac, but cannot and would not be, and is not, called a lunatic.

I had recently under care a man who has these symptoms: trembling of the hands and feet, trembling or twitching of the lips, slowness of speech, difficulty of articulation, impaired memory, difficulty and slowness of mental concentration, dread of going upstairs, and uncertainty of gait at times. His handwriting is so affected that he writes like one with writers' cramp, very slowly and tremblingly, and in writing or speaking is, or was, apt to use wrong words or to leave out words

These are among the preliminary symptoms of the general or progressive paralysis of insanity, and very properly belong to the physical and mental symptoms of that disease; but this man is not insane. His mental responsibility is impaired, but not seriously impaired; he can, and does, attend to his business, and mingles in domestic and social life. Even if he should develop delusions hereafter, he has no delu-

sions now; even if he should subsequently die in the insane asylum, he is not insane to-day.

This case is instructive as illustrating the position I have elsewhere maintained, that, in court, the physical symptoms that sometimes accompany insanity should not be referred to by experts. *Insanity is a mental disease, and is to be diagnosticated by mental symptoms.* Although this man had some of the physical symptoms that accompany general paralysis of the insane, he yet was not insane. I have seen a number of cases of this kind.

I had, at different times, under charge two ladies who were very nervous indeed, and were troubled with many of the usual symptoms of nervousness, such as sleeplessness, constipation, indigestion, aching feet, monophobia, or fear of being alone, etc. One was troubled with a fear of going downstairs, the other had a fear of society, of meeting people; one was married, the other unmarried; the married one felt that she had never really loved her husband. In the case of one there had been a family history of insanity, and other nervous diseases; the other also had a very nervous mother.

Both of these persons were troubled with a peculiar kind of delusion, of which they could not rid themselves, namely, that gentlemen whom they met on the cars and in the streets were looking at them and watching them, and understood the secrets of their persons, their peculiar disease, and their lives.

One of these persons subsequently developed other symptoms of positive insanity, and was for a time taken care of by her friends; the other was certainly not insane, but was almost insane, and might become so, but had not when I last heard; and the other had recovered sufficiently to attend to important duties. These are border-line cases—mono-hypochondriacs.

I was at one time consulted by a man in middle life, who had recently married, and who, instead of being made happy, was made miserable by his marriage.

The symptoms were subjective, not objective. He loved his wife and she loved him; he loved her as much after as before marriage, but the thought and act of marriage seemed to have developed in him a mono-hypochondria, for which he had somewhat of an inherited tendency, and which was of such a nature that he regretted his marriage. This regret began before marriage, on the approach of the wedding. It was not caused by anything in the conduct of his companion, or of any human being, but arose in his own brain.

He went as far as one could go, without being positively insane; he could reason about his symptoms intelligently and scientifically; he was of a cool, calm, and matter-of-fact, rather than an imaginative temperament; he analyzed his difficulty with calmness, but nevertheless it was a real difficulty, of a most serious character to him and to his wife. It was accompanied by other symptoms; he lost sleep, and bore on his face the impress of sorrow all the while he was living with his wife.

They talked over the trouble with frankness and kindness, but frankness and kindness did not cure or relieve.

I gave him various remedies, which helped him somewhat, and saved him from disease, and I then advised temporary separation, which advice was followed, and with most excellent results.

This man would by many have been called a fool, and a diagnosis of that kind would be most obvious, indeed; but he was not a fool any more than is a small-pox patient. He was really and seriously sick. It was a case of mono-hypochondria, a serious case enough for that disease, but not serious enough to bring it into the catalogue of insanity. It is possible, and even probable, that this terrible experience saved him from something worse; for he has been growing better and better, and the last time I heard from him he was perfectly well; though I question if, even now, there might not be a relapse under exciting conditions.

A young lady has the following history, As the result of a fall on the ice, some years before, she had developed quite a large number of nervous symptoms; one of the chief of which was a desire to go abroad, where she had once before been; and with this morbid desire—for in this case it was morbid—there was great irritability in small matters, mental depression, tendency to weep, neurasthenic voice, aching eyes, spinal irritation, some uterine trouble, retroversion and leucorrhœa; there was also fear of society, which was an annoyance to herself and to her family.

This was one of those cases which are hard to manage, but they are not insanity; there was mental impairment, but not of the most serious character. She got better, but she did not get well, nor did she become insane, and I believe she will not become insane.

I had under care for a long time a man who had been in the profound stages of melancholia, with the delusion of having committed the unpardonable sin. A simple hypochondriac does not have a fixed delusion of this kind. He gave up his business and devoted himself to getting well; he has now returned to business; but the struggle was a long and a hard one. One of the symptoms of his condition was writing exceedingly long letters and preparing very long documents. This is one of the symptoms of insanity when it occurs in a person who does not naturally do such things. As he improved in health, his letters became shorter and shorter, more coherent and more to the point.

There were many physical symptoms which accompanied this condition; he was troubled with sleeplessness, with constipation and indigestion; and yet, with all this history of brain disorder, his mind was usually clear enough all through to transact business, and to mingle in society; and had there been any interests involved, there would have been strong opposition to the view that he had been at any time insane; although there is no question but at times his mental responsibility was impaired quite seriously. It was a case of mono-hypochondria deepening at times into insanity, then returning to hypochondria, thence to recovery.

A married lady consulted me, with many symptoms, the chief of which was what I call monophobia—fear of being alone joined with fear of travelling. This symptom came upon her suddenly, almost like a stroke of lightning, at the Exposition at Chicago, her friends having left her for a few moments alone while she was in a state of nervous depression.

This symptom—monophobia—is common enough, but it is rarely so bad as in the case of this lady; she must have not only a *companion*, but *companions*—a body guard. When she came to see me she came with her mother and sister. She said she could not come alone, or even with her husband; for he might leave her alone for a few moments, but her mother would be more likely to stay with her, and this thought gave her a feeling of greater security

with her mother and sister than when with her husband.

Her mother told me that some one must always be with her, even at home; if she even suspects that they are going out to leave her alone her countenance will change, she will show her fear at once, in her face.

This lady is not a fool, and she is not crazy; she is bright, intelligent, intellectual, a remarkably brilliant conversationalist, and is fully able to comprehend her condition.

As a girl, she was lively, not melancholy; but she came of a nervous family, or rather from a family in which there was a nervous tendency; and in her case, nervousness takes the form of mono-hypochondria—a special form of mental impairment which is not insanity, and is not likely to develop into insanity.

There is also in the case of this lady, pantophobia—a dread or fear of everything—she has a dread of assuming responsibility: for example, she plays the piano well, but cannot play in public if announced beforehand.

Morbid impulses.—Morbid impulses are not necessarily symptoms of insanity. On this head it is proper that we should dwell for a moment, for it seems to be understood among neurologists of all countries that these morbid impulses are symptoms of insanity; I cannot but regard it as an error that these views should be held and diffused among society.

True, there are indeed morbid impulses that are serious enough to indicate serious mental impairment, as when a mother is forced to murder her beloved and favorite child, or to commit suicide, but there are vast armies of morbid impulses that are not signs of lunacy; the more mild are evidences of mild, not serious mental impairment, not uncontrollable enough to be thought signs of so grave a condition as insanity. Persons who are thus affected are border-line cases, who may, or may not, ever cross the border; they say they are tempted to kill themselves, at different times, all their life long, or they are tempted to kill others—their husbands, their wives, their children, their neighbors, or their friends; but as "barking dogs seldom bite," they never do any harm to themselves or others; they are not mono-maniacs, but mono-hypochondriacs.

It has been said, and it will again be said, that persons who have these morbid impulses can be influenced by fear of punishment, and very well they may, for they are not insane; if they should become insane, the fear of distant punishment would have no influence over them.

I had under my care the wife of a clergyman of this city who has been annoyed with this morbid impulse—to cut herself with a knife. She has said to me that she hates to take a knife in her hands, for fear she may cut her throat. This lady is nervous, but she is not insane now, whatever may be developed hereafter; her impulse is controllable, and will probably remain controllable.

I had under my care a young man who had the following symptoms: fear of society, which kept him from going among strangers; poor memory, mental depression, and a morbid fear that he may say or do some foolish thing in society; even when alone he fancies himself in society, and saying foolish things there; he talks to himself in the street without knowing it; he has this morbid impulse, when he has a knife in his hands he desires to cut himself; but he does not do so, and is not likely to. His mental capacity is impaired, but not seriously enough impaired to class him among lunatics.

There is a case of a once well-known clergyman, to which my attention has been called by my friend, Dr. Joseph Parrish. This clergyman has been obliged to give up his pulpit and entirely desist from preaching, because of *irresistible attacks of profanity* that come upon him. He would be writing a sermon, perhaps, when one of these profane impulses would seize him, and he would arise from his desk, walk up and down the room shaking his fists, and utter in rapid succession various and violent oaths, after the manner of pirates and blackguards. The attack would last—like an attack of neuralgia, sick headache, nervous dyspepsia, or hay-fever—for a limited time, then the storm passed over, and the air was once more clear, until, through over-labor or mental effort, a new excitement was aroused. So severe was the affliction, and so great his dread that an attack might seize him in public, that he permanently abandoned the ministry.

This case is quite well known, and it is specially noticeable from this: that he was a clergyman's son, and had been well brought up—certainly was not brought up to swear.

Is this accomplished gentleman and able clergyman a lunatic? and if his impulse should take another form, if swearing should give way to murdering, would he subject himself to be hanged in the presence of his congregation?

According to my analysis his mental responsibility is impaired; but not so seriously impaired as to constitute insanity; for although the impulse to swear is as irresistible as an attack of inebriety, of neuralgia, or sick headache, or sleeplessness, under a special exciting cause, such as mental excitement or over-work, yet he still has, and, as I believe, always has had it in his power to control these exciting causes, and this fact alone saves him from absolute insanity. He is on the border, but not over the border, and may never cross it.

Baltimore Medical Colleges, etc.—The commencements of the Baltimore schools took place on the 1st and 7th inst. The University of Maryland graduated 69; the College of Physicians and Surgeons, 151; the Baltimore Medical College (recently organized) 17, including one female. At the annual meeting of the Alumni Association of the University the oration was delivered by Professor Robert Bartholow (class of '52), and a prize of fifty dollars was awarded Dr. Randolph Winslow for an essay on "Abnormalities in the Circulation in Man." A "Woman's Medical College," for the exclusive education of women, has lately been incorporated, with a faculty of six, all gentlemen. The college has already been located in a central position, and lectures will commence October 1st, a hospital for women and children, a training school for nurses, and a nurses' directory, similar to the one in Boston, will be carried on in connection with it. There is much discussion now as to the permanent site of the Johns Hopkins University, whether it shall remain in the city or be transferred to Clifton, in the suburbs, as Johns Hopkins himself designed. Another subject of interest to the Maryland profession, is that of the regulation of prostitution, which has been brought prominently forward through the influence and writings of Dr. John Morris.

A CONTRIBUTION AS TO THE EFFICACY OF ESERINE IN GLAUCOMA AND ANALOGOUS AFFECTIONS.

By CORNELIUS WILLIAMS, M.D.,

NEW YORK.

On January 8, 1881, L. G——, fifty years of age, presented himself to me at the Ophthalmic and Aural Institute, ailing as follows: The conjunctiva of the right eye was much reddened, the vessels distended, no unusual secretion. The cornea somewhat hazy; a very pronounced zone of circumcorneal injection; iris dull and lustreless, with here and there some inflammatory elevations upon its surface; pupil about twice the size of the other; does not react to light; V1+; media so opaque as to allow only the larger vessels of the fundus to be seen. The patient complained of great pain, preventing sleep and destroying appetite.

Diagnosis.—Iritis plastica; glaucoma consecutiva.

Patient stated that the eye had been inflamed for five or six days, and that a lotion obtained from a druggist only had been used.

I admitted him to the hospital, and ordered six leeches to the temple, a brisk purgative to be administered (the man was of full habit), and instilled a one per cent. solution of eserine into the eye, and ordered that he be confined to bed in a darkened room. The solution of eserine I dropped into the eye at once, and while the patient was yet in the dispensary I noted that there was lessening of the size of the pupil, with diminution of tension.

On the 9th I found the pupil again dilated. T1. Farther instillation of eserine, and, at the suggestion of Dr. Knapp, occasional instillation of atropine, one per cent., was practised, to the end that synechia might be prevented. The succeeding five days were marked by increase of tension at night, with consequent pain and sleeplessness, to be followed by decided diminution of tension with greater ease on the morrow, the result of the eserine. The use of the atropine was, after the first day or two, found to be unnecessary; for while it probably favored increase of tension, it became evident that the nocturnal glaucomatous dilatation of the pupil, and subsequent contraction by eserine, would effectually prevent adhesions.

On the 14th, after a more than usually restless night, the tension again increased to T1+, and did not yield to several instillations of eserine. Dr. Knapp thought sclerotomy would have to be done, unless the tension could be speedily reduced. I ordered chloral hydrat., 1.25, potass. bromid., 1.50, and eserine to be instilled every four hours.

On the 15th I found T+ only. Patient had passed a comfortable night, and there was less injection of eyeball. After this the progress toward complete recovery, though very slow, was steady and under daily instillations of eserine, and occasional draughts to induce sleep, the patient was so far well, that at the end of three weeks he was discharged, to become an out-patient. At time of discharge the condition of the eye was Tn.; conjunctiva still red, and some circumcorneal redness, with bluish lustre of sclerotic; pupil normal in size, but reacts a little more slowly than the other; media clear; optic disc redder than its fellow; choroidal congestion; no limitation of visual field (I regret that I have no record of the examination of the field at the time of his entrance, though I think there was no decided limitation); no excavation; vision, $\frac{2}{3}$. Patient says he sees nearly as well as ever. The patient continued to report frequently at the dispensary. The circumcorneal congestion very gradually faded, until at the end of six weeks all that remained was the dark bluish discoloration of the upper part of the sclerotic.

INJURY WITH MUCH HÆMOPHTHALMOS—DISLOCATION OF LENS INTO VITREOUS—CONSECUTIVE GLAUCOMA.

On December 28, 1880, Mrs. A. McG——, fifty-two years of age, was sent to me by my colleague, Dr. Wallach, at Mt. Sinai Hospital. A few days before, while cutting wood, a piece flew up and struck the left eye, destroying its vision in a few moments. On examination I found some contusion of lids, congestion of conjunctiva, circumcorneal injection; cornea clear; anterior chamber seemed to be entirely filled with dark blood; Tn.; mobility unimpaired; no perception of light. Ordered atropine, 0.06 to 15.00, to be dropped into the eye three times a day, and bandage.

January 4, 1881.—Patient came again. Has had considerable pain; circumcorneal injection increased; no change in condition of anterior chamber; T2. Ordered eserine, 0.015 to 2.00, to be dropped into the eye four times a day; bandage. Stopped atropine. Four compound cathartic pills to be taken at bedtime.

January 6th.—Condition of eye much improved. The blood in anterior chamber has been now so far absorbed that the iris is visible; the pupillary area is, however, entirely occluded; less circumcorneal injection. Continued eserine; Tn.; no pain. The pills produced free purgation.

January 7th.—Eye still clearing up. Pupillary space in part free, and it is found that the lens is dislocated into the vitreous. Clots of blood float to and fro through the pupil, with the movements of the eye, like pieces of flotsam. Tn.; circumcorneal injection disappearing. Can discern motions of the hand, though the background cannot yet be illuminated. Eserine to be continued.

January 11th.—There now seems to be no iritis. The grosser details of the fundus can be made out with the ophthalmoscope, and with the aid of a lens patient can count fingers at five feet. Tn.: clots of blood still float about within the eye. Ordered to use eserine every other day—one or two drops; to report from time to time.

I saw the patient at intervals of a week, for a couple of months. There was no return of the glaucomatous symptoms; the eye became clearer, but vision remained about the same. I cautioned her as to the danger that she was constantly exposed to, and told her to come at once upon the supervention of any disagreeable feeling in either eye.

ACUTE GLAUCOMA IN A MYOPIC EYE.

On November 19, 1881, Louis Suleger, aged thirty-two, German druggist, myopic $\frac{1}{4}$, came to me at the Ophthalmic and Aural Institute with the following condition of the left eye: Conjunctiva moderately injected; some haziness of cornea; pupil dilated to about twice its natural size, slightly movable under oblique light; T1 +; diffuse opacity of the vitreous; no details of the fundus can be made out by ophthalmoscopic examination, except the outlines of the larger vessels; can count fingers at three feet; visual field much narrowed, almost absent on nasal side. (This examination was made in the dark room by artificial light.)

Patient states that his eye had been painful with

failing vision for six days. Dr. Knapp saw this patient, and in his opinion the tension was T2. I immediately put several drops of a solution of eserine, one per cent., into his eye, which I repeated several times in the course of the hour that he remained at the dispensary; ordered that four leeches be applied to the temple, and prescribed a calomel and podophyllin purge, to be followed in the morning by a saline draught; also that eserine, one per cent., be dropped into the eye four times a day, patient to lie in bed in a dark room. There was a slight diminution of tension before patient left the hospital.

November 21.—Patient reported again. He had applied the leeches and taken the purge as directed, but had failed to remain quiet as ordered, and had lost the prescription for the eserine. The media are now entirely clear; not a trace of opacity in vitreous; fundus in every detail to be seen without any difficulty; pupil very slightly dilated; no pain; visual field much larger, but still markedly contracted. (Examined by daylight.) The barest perceptible increase in tension. I instiled eserine again; ordered the patient to keep quiet, and gave a new prescription for the solution, to be used once a day; to keep the bowels open, and to report again in a few days, or at once upon supervention of any disagreeable symptom.

In this patient there was also no excavation of the optic nerve. He has large posterior staphyloma in both eyes, and, undoubtedly, if I had an opportunity of proving it, I would have found some increase of his myopia in the eye which had been affected with glaucoma. The patient would not, however, remain in the hospital, and has not reported since, though I have written to him, and I regret that I cannot report as to his present condition. I may say the same of the other cases reported. I have used eserine in other affections of the eye than those that were glaucomatous—notably in a case of diffuse opacity of the vitreous without, as it subsequently appeared, any gross lesion of the choroid—with very marked benefit. I have now under treatment the case of a child with congenital hydrophthalmus and opaque corneæ where eserine has been used for six months, part of the time with atropine, alternately. In this case there has certainly been improvement. The opacity is less, clearing up at the periphery. The eyes, which were at first hard with a very deep anterior chamber, are now of normal tension, anterior chamber not so deep. There is now certainly perception of light, which, in the beginning, was not to be demonstrated. It is, however, natural that as the child grows older, the corneal opacity disappearing, such percipient elements of the retina as remain intact will be called into functional activity.

In a case of congenital irideremia, which I have observed for several years, there are several ciliary staphylomata, and, undoubtedly, a remittent glaucoma. I and others have seen the patient when there was decided increase of tension, and she describes attacks which have all the chief signs of glaucoma, colored rings, great pain, with almost total blindness, etc. In this case I have used eserine by instillation into the eye, with the positive effect of reducing the tension to the normal.

It is without doubt that in any case of glaucoma, as in all severe diseases of the eye, general treatment of the patient is of the very highest importance; and further, it may be assumed as a postulate, that the same is too frequently ignored, even flagrantly neglected.

What I claim in the foregoing cases of glaucoma, treated by eserine and generally is not that the eserine alone did the work, but that eserine was the determining and most essential factor in the treatment—without it the patients would not have been relieved; without the adjuncts used they may not, or possibly could not, have been cured.

In the latter two cases mentioned above I hope to have something to say more at length at a future time, and also as to the etiology of the disease glaucoma.

About the pathogenesis of glaucoma and its pathological environment, very much has been written of an imaginative character that in the light of riper experience, has not stood the test of applied investigation. Theories, perhaps a little fanciful and fine drawn, would not be objectionable if borne out by facts demonstrable to others, or not borne down by other facts more pertinent and convincing having an opposite bearing.

In general terms, if it be stated that there is an inflammatory disease of the choroid, or more broadly, of the uveal tract, more or less acute in its nature, attended by transudation of fluid in excessive quantities within the eye, which excess of fluid for its removal is operated upon according to the same laws which govern the removal of pathological transudations in other closed spaces of the body, as was its transudation in the first place, and that the subsequent correlated phenomena, or lesions, are strictly mechanical and nutritive in their essence, the disease glaucoma will have been defined.

23 Park Avenue.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

Service of WILLIAM GOODELL, M.D.,
Professor of Clinical Gynecology.
(Reported by Guy Hinsdale, M.D.)

URINARY CALCULI IN THE FEMALE.

Gentlemen: The first case which I bring before you to-day is one of stone in the bladder. I intended operating last Saturday, but her catamenia very inopportunely came on. Now, it is always a good rule to adopt not to perform any operation on the pelvic organs just before, or during the monthly flux, for there is a greater vulnerability at that time than during the intermenstrual period.

Stone in the bladder is of rare occurrence in women, because, as I said to my class yesterday, in the didactic course, calculi easily escape through the female urethra, owing to its comparative shortness and large bore. As a rule, stones found in the female bladder are not formed in the kidney. All such calculi, after escaping from the ureter, are generally swept out at the next micturition. The stones that you will find are generally foreign bodies, which have been introduced from prurient motives, and have afterward become encrusted with urine salts. The nucleus is very often a hair-pin, or perhaps a slate-pencil, which has been passed into the urethra, and has slipped away from the fingers.

This is an exceedingly interesting case, because the history points to the fact that the stone has had for its nucleus some foreign body. The woman, some five or six years ago, had a labor followed by

pelvic cellulitis; there has probably been an abscess, which opened a way of communication between the rectum and the bladder. That is the only way in which I can account for some symptoms presented in the case. The patient passes from her bladder gas with a characteristic fecal smell, and not only this, but tomato and pear seeds, and occasionally fecal matter. Around these foreign particles calculi may readily form. There is also in this case the usual history of severe cystitis, there being great frequency and distress in making water. Sometimes she passes blood and pus, and often she is fairly doubled up with urinary tenesmus.

I have introduced the uterine probe into the bladder; there is a very audible click as the instrument comes in contact with some foreign body. Those of you who are near by can hear it. There would be a louder sound if I had used a larger instrument. Dr. McCall, the attending physician, has also obtained the same sound, and on that account sent her to me. As I strike the stone it has a queer metallic feel, as if it were either a very hard stone, or a piece of metal.

How shall we remove it? Shall we, as gynecologists, crush that stone, or shall we endeavor to remove it through the urethra? The rule to guide us is this: If the stone be larger than the girth of the index finger, do not attempt to remove it through the urethra; an incurable incontinence of urine will be likely to follow if you try to remove too large a stone in this way; in such a case it is far better to cut for it. If, however, the stone be of moderate dimensions, you can dilate the urethra to the size of your index finger, and remove it with a delicate pair of forceps. The operation of vaginal lithotomy is so easy, and such a safe one, that, in the majority of cases, it would be better to resort to it than to attempt to crush. If you feel that you have the requisite skill to attempt this operation, very well. But it is a difficult matter if the stone be very hard, or of large size. Let me estimate its size and determine its form with my finger.

I take this uterine dilator, which serves so many good purposes, and pass it into the urethra. These bladders with cystitis are dreadfully, dreadfully sensitive. It gives as much pain to touch them as it would to pinch an exposed nerve. If we decide to cut, in this case, how shall we proceed to the operation? We should first pass a sharply curved sound into the bladder, and push down the base of that organ at a point just beyond its neck; then, with a pair of scissors, a hole is cut through the anterior wall of the vagina, into the bladder, upon the tip of the sound. The hole should be made directly in the median line, and, with the scissors, the incision is to be carried directly upward toward the cervix uteri. By following this course we shall avoid any injury to the neck of the bladder or the ureters. After removing the stone, the edges of the wound are brought together with silver sutures, and treated in precisely the same manner as after the operation for vesico-vaginal fistula. In cases complicated with cystitis, as in the present instance, it is better to keep the incision open for a time, until the irritation caused by the foreign body has been relieved.

A few years ago a very interesting case was brought to me for operation. The subject was a hysterical girl, who for a long period could not pass her water, the physician in attendance being compelled to use a catheter several times a day. The silver catheter finally became worn out, and on one occasion, while in the bladder, a piece broke off; it could not be removed through the urethra, and the physician, very properly, decided to cut. In doing the operation, however, he cut the neck of the bladder, and subsequently found that he could not close up the wound. He then brought her to me, and I did the ordinary operation for vesico-vaginal fistula, but her health was very poor at the time, and every stitch cut out. I sent her home, put her on iron and good food, and after her strength returned I repeated the operation, with entire success.

While talking with you I have been slowly stretching open the urethra. The dilatation must be slow to do no harm. I now coax in my little finger, which has been well oiled. We have here an unusually small urethra, and it is extremely difficult to make any progress. In fact, Dr. McCall says that the urethra was so small that he could hardly get a probe in. He has been gradually dilating it for several days before bringing the patient here. I was looking at the little rubber bags which we use in labor cases to dilate the cervix, to see if any of them could be introduced into the urethra, but they are too large.

This woman's urethra is so unyielding that the pressure on my little finger makes it numb; but I finally reach the neck of the bladder. I have never had such difficulty in getting into the bladder before. I can just touch the stone; in fact, I think there are two of them. I now introduce my index finger slowly, and, by placing a finger of my other hand in the vagina, I lift up the whole floor and fundus of the bladder. I can readily outline two stones. I feel them perfectly; the smallest stones will rarely escape detection by this double manipulation. Should an operation through this vaginal wall be needed, we have very much less important structures to cut than in doing lithotomy in the male. I can feel how large this stone is, and I shall try to grasp it in its shortest diameter. I introduce these fenestrated forceps. You see I am getting it out precisely as I deliver a head in labor. You can all see it now emerging from the urethra. Let me see if, in extracting the stone, I have done any mischief here. There seems to be only a little bleeding from the upper margin of the meatus. Now I shall go for the other stone. Let me see if I can catch it endwise. It is very plainly much smaller than the other one. These are very pretty stones, very smooth and very hard ones. I shall put them on a plate, and pass them around for your inspection. We must now see if there are any blood-clots remaining in the bladder. If there are, they must be washed out. I shall now pass the sound gently here and there in the bladder, to find, if possible, the fistulous opening which must exist, but I do not succeed in hitting it, and it will not be wise to worry the bladder by a prolonged examination.

How shall we relieve this woman of cystitis? It will undoubtedly be relieved, not only by the removal of the calculi, but by the overstretching of the walls of the urethra. The latter is one of the best means we possess for relieving this most distressing affection.

As the mucous lining of the bladder has undoubtedly been irritated by the means resorted to for removing the stones, I shall give this woman a mixture containing belladonna, soda, and sweet spirit of nitre, and shall also prescribe a rectal suppository containing one grain of the aqueous extract of opium, to be used at bedtime. She will come to see us occasionally, and we shall keep her under observation until she is well.

Progress of Medical Science.

Value of Litholapaxy.—Dr. Van Buren, of New York, in giving his experience of the operation devised by Dr. Bigelow, of Boston, says that he has been greatly pleased with its results. The bladder has been found amply able to endure the prolonged operation, and he believes that *Bigelow's operation* will add honor to American surgery. In thirty-four cases that have been under his immediate supervision, alone or in conjunction with Drs. Keyes and Stimson, since January 1, 1879, no stone has been found that could not be seized and crushed by the lithotrite, and the bladder each time freed from the fragments at one sitting. Of these 34 cases, 33 resulted satisfactorily, and in the one fatal result an autopsy revealed diseased kidneys of long standing. In one case, of a man sixty-five years of age, urates to the amount of 1,065 grains were washed out in seventy-five minutes, and the patient was convalescent within a week. In another case, where the patient was sixty-five years of age and had an enlarged prostate, 465 grains of phosphatic deposit were removed in sixty-five minutes, but though there was hemorrhage from the enlarged gland, no chill or any unfavorable sequela was experienced. Dr. Van Buren believes that one great advantage of this operation lies in the fact that the bladder, relieved of the stone, is left at rest and free from irritation. In a small proportion of cases the catheter was required, but then only for a day or two. In a few, where chronic cystitis had existed previous to the operation, the deposit appeared at intervals, but judicious treatment checked the tendency. In very young patients, Dr. Van Buren adheres to the older views, and prefers cutting, because the urethra has a small calibre. In some thirty or forty cases of lithotomy in the young, he has had a favorable result in every instance.—*Medical News*, January 14, 1882.

Extra-Uterine Pregnancy.—Dr. Wm. Goodell has reported the case of a patient which he saw in consultation during the eighth month of pregnancy. As the health was failing rapidly, he performed laparotomy. Upon opening the perineum a cyst, containing a macerated fœtus, was disclosed. The placenta was still adherent. The fœtus was removed and the placenta easily stripped from its bed. No hemorrhage followed. Up to the fifteenth day after the operation the patient did well. The wound had healed, the stitches had been taken out, and the drainage-tube was about to be removed when convulsions suddenly were developed and the patient died in thirty-six hours. An autopsy revealed disease of the kidneys, and complete disappearance of the cyst-wall. No connection between kidney trouble and the abnormal gestation could be made out.

A Dome Trocar-Catheter.—Dr. Fitch, of Halifax, Nova Scotia, has devised a new instrument called the dome trocar-catheter, for tapping the bladder through an enlarged prostate. It consists of a common catheter (No. 11 American) running in a canula that terminates in a sharp point, the canula being fitted with a piston and a thumb-screw at the proximal extremity, so that advantage can be taken of the one or the other at the will of the operator. A protuberance near the cutting-point of the canula protects the soft parts. To tap the bladder through the prostate, the instrument, arranged as a catheter, is introduced by the urethra until resistance is felt at the enlarged gland, when the canula is thrust forward by means of the piston and held in place by the thumb-screw, and the instrument is then pushed on into the bladder, when it is reversed, and the urine is drawn off by the catheter. A small opening at the extreme end of the catheter allows urine to enter the instrument, thereby showing when the catheter has entered the bladder. This little instrument, Dr. Fitch believes, will be found useful both in tapping the bladder above the pubes through the rectum, or even in tapping ovarian cysts through the vagina.—*New York Medical Journal*, February, 1882.

Soluble Compressed Pellets for Hypodermic Use.—Dr. Wilson, Ophthalmic and Aural Surgeon to St. Mary's Hospital, Philadelphia, suggests a new method of putting up drugs for hypodermic use. Solutions, he claims, if kept for any length of time, are prone to undergo change and always become inert. Many things have been advised to prevent such results, but in vain. In ophthalmic surgery, especially, he claims that serious inflammation has followed the use of the ordinary hypodermic solutions. So universal is this, that solutions are less used than formerly. The practice of making them extemporaneously has, therefore, been advised by Professor Bartholow, whose name is intimately connected with hypodermic medication: but this practice is slow, and when doses below one-third grain are required, accuracy must be impossible. Some form of preparing drugs where convenience, accuracy of dose, and action, are combined, is, therefore demanded, and Dr. Wilson claims such for his compressed pellets. The drugs are made up with sulphate of soda simply, which acts as a disintegrator, and, in contact with water, dissolves, leaving the drug in a finely divided condition. The advantages he claims for these pellets over any other form of hypodermic medication are: Their convenient size, their durability, precision in dosage, certainty and quickness of action, and adaptability for internal administration, especially in ophthalmic medication.—*Transactions of the American Medical Association*, 1881.

Bromide of Arsenic in Diabetes.—Clemens recommends the liquor arsenic. bromat. very highly in the treatment of diabetes insipidus and mellitus. The dose to commence with is one drop in a goblet of water, three times a day. This quantity should be gradually increased to three drops given as many times daily. As soon as an appreciable diminution is noted in the amount of sugar excreted, which usually occurs within two weeks from the inception of treatment, the dose should be gradually reduced to the original, and this should be kept up for as long a time as may be thought necessary. No harm results from continuing the use of the remedy for months or even years. The diet should be that ordinarily recommended for diabetics, and the patients, moreover, should be out in the open air as much as possible. (The author neglects mentioning the formula of his preparation, which he introduced in 1859, and described in the "Deutsche Clinik" of the same year. It is known as "Liquor arsenic. bromat. Clementio," and is a perfectly colorless and transparent fluid, without color or taste, which may be obtained from Felix Alfermann, Berlin).—*Allgemeine Med. Central-Zeitung*, Jan. 14, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, March 25, 1882.

POST GRADUATE COURSES.

THE large majority of graduates from our medical colleges return to their homes and at once prepare for the active practice of their profession. In most instances the reasons for this are twofold. In the first place, there is a want of funds and a pressing necessity for earning a living in the shortest possible period; and secondly, there are few opportunities for post-graduate instruction aside from an appointment as interne in one of the hospitals. Of course the young graduate may go abroad and continue the study of any branch of medicine or surgery he may choose, but very few, comparatively speaking, are pecuniarily able to do this. The ambitious man will continue his studies on his own account, it is true, and will make the best of the chance clinical opportunities which his scant practice may afford; but that he is far from being satisfied with his efforts is evinced by the large percentage of practising physicians who come yearly to this and other medical centres for the sake of professional improvement. In some of the medical schools there are, during each term, as many as fifteen to twenty per cent. of medical practitioners in the class. These gentlemen, after struggling along as best they could, have become acquainted with their deficiencies; they are brought by hard experience to appreciate what kind of knowledge they require, and, often at great sacrifice, come to the fountain-heads to be supplied. There is hardly a progressive medical man away from the centres who does not at some time or other hope for an opportunity to live over the general experiences of his more active student life; to study disease in the hospital ward; to perfect himself in diagnosis; to make sure of physical signs; to brush up on his surgical anatomy; to look through his microscope over the shoulder of the pathologist; to witness operations by the hospital surgeons—in fact, to be more or less directly in communication with the advanced thinkers and workers of his day.

As a rule, such gentlemen who visit the larger cities are earnest men, faithful workers, and determined students. No one must doubt that they are not willing to do to the uttermost whatever can be done to render their stay from business and home as profitable as possible. In this connection it becomes our medical teachers to ask themselves the question whether or no the facilities which are afforded these willing and ambitious workers are what they should be. We think it must be answered in the negative. It is true that there are occasionally given special courses of instruction in different branches, but these generally are little more than spasmodic efforts and so far as meeting the general demand for post-graduate instruction practically amount to nothing. There is nothing left for the medical man but attendance upon some one of the medical colleges, and the taking of what he needs from the general course. Comparatively speaking, he obtains very little. He does not expect to go over the fundamental branches as a student, and consequently, precious time is lost, which by some proper system of study might be thoroughly utilized. He may visit the college clinics, the hospital wards, or occasionally listen to a didactic lecture, but in all this he necessarily feels that he is treated more as a first-course student than a man whose serious business it is to perfect himself in the higher branches of his calling. All this seems to our mind to prove the necessity for the better development of post-graduate courses. Instead of the latter being merely supplementary to the ordinary college course, as at present, they should be entirely distinct and independent, and every effort should be made to systematize the advanced studies belonging to such a course, in a manner to properly economize the time of stay in the city and to thoroughly utilize the numerous opportunities for clinical instruction which abound in the great cities. Indeed, there is no reason why special advanced schools should not be created for the purpose. We are sure, if properly managed, that they would be thoroughly successful.

BIRTHS AND DEATHS IN NEW YORK CITY.

THE attention of the profession deserves to be called to the very complete summary of births, marriages, and deaths occurring in this city, compiled by Dr. John T. Nagle, of the City Board of Health.

New York City contained, in 1880, a population of 1,206,577 inhabitants, of whom 727,743 were native born. The average number of persons contained in each house is 16.62. In contrast to this, the average number of persons in each house in London is 7.8. The houses in London, however, are closer together, since there are 42 persons to the acre in that city, and 48.47 in New York.

The number of deaths in this city, in 1880, was

31,937, giving a death-rate of 26.47 to every 1,000 inhabitants. This shows a diminished mortality compared with the first half of the preceding decade, when the rate was over 28 per thousand.

Some especially interesting facts are given regarding the deaths from pulmonary diseases in this city.

The deaths since 1804 were 1,036,355. Of this number, 14.76 per cent. were from phthisis. The per cent. of deaths from phthisis in 1880 was 14.73, and for the decade preceding about the same proportion. Thus there has been hardly any appreciable decrease in the proportionate number of deaths from this disease in late years, although the soil has been made drier by extensive sewers and drains. On the other hand, there has been a very decided increase in the proportionate number of deaths from pneumonia and bronchitis. Thus in the period from 1804 to 1842, inclusive, the proportion of deaths from pneumonia and bronchitis to the deaths from phthisis was 33.81. For the period from 1843 to 1880 the proportion was 66.29. For the whole period from 1804 to 1880 the proportion was 59.16. This very remarkable increase in the mortality from pneumonia and bronchitis is a fact of great importance to physicians and sanitarians. The ratio of deaths from pneumonia to that from bronchitis is about as five to two. Most of the deaths from phthisis were among adults.

On the other hand, nearly one-half of the deaths from pneumonia were among children. A slightly less number of deaths proportionately from bronchitis occurred in this class. The facts given regarding deaths from diarrhœa are quite generally known, and we need not refer to them now.

In 1880 there were 1,419 deaths attributed to Bright's disease. It is a curious fact that a very large proportion (396) occurred among the Irish, who number 198,595. There were only 360 deaths from this cause among the native-born, who number 727,743. Cancers caused 659 deaths. The most frequent form of the disease was cancers of the liver (151) and of the uterus (151). After this in frequency come cancers of the stomach (144), and then cancers of the breast (92).

Nearly one third of the deaths during 1880 (9,572) were from zymotic diseases. Children suffered by far the most from this class, the total mortality among those under five years of age being 7,388. The number of deaths in 1880 from croup was 910; from small-pox, 31; from cerebro-spinal fever, 170; from suicide, 152.

Considerably over one-half (17,816) of the total deaths occurred in tenement-houses. The mortality in children living in such houses is, as is well-known, very great. The percentage for those under five years of age was 56.69; among the same class living in private dwellings, the percentage was only 39.79. Nevertheless, as we have previously maintained, tenement-houses are not any more fatal to children than to adults. The percentage of deaths to the total mortality was, in tenement-houses, 55.91; in private dwellings, 23.63.

The number of births occurring in the year 1880 was 27,536, which gives an excess in deaths of 4,201. This would have a very dark look, were it not that New York has so large a floating population and such a constant influx of new-comers.

ANTI-VACCISM AGAIN.

In the current number of the *North American Review*, Dr. Henry A. Martin contributes an article on anti-vaccism, it being intended as a reply to Mr. Bergh. Dr. Martin's article is characterized by a tremendous earnestness that makes it interesting and effective. He has represented the profession well in his present defence of its position regarding vaccination.

The charges against vaccination are two: (1) that it does not protect; (2) that it introduces disease and impairs the vigor of the system. These two points are discussed separately by Dr. Martin. With regard to the first, he does not attempt to fortify his position by statistics, but simply gives references. The evil possibilities of small-pox are portrayed, however, by comparing the epidemic of that disease in Boston in 1721 and in 1872. At the former period over half the population were struck down. The epidemic of 1872 was exceptionally malignant, and it no doubt would, if unchecked, have affected an equal proportion of the population. In other words, it is all but certain that without vaccination there would have been 100,000 cases of small-pox in Boston, and 50,000 deaths from it.

A word is said in favor of "those twin scourges of humanity, physic and physicians" (Bergh). It is the habit of the less decent anti-vaccinators to charge physicians with encouraging the practice from self-interest, for the sake of the fees obtained. Dr. Martin states (and this is not generally known) that the medical profession, when they first unanimously adopted vaccination, more than seventy years ago, did so at a great pecuniary loss. Small-pox cases brought them, before Jenner's time, their greatest fees and widest reputation. Indeed, many of the eminent physicians of the last century were so largely by reason of their reputed skill in treating small-pox.

As regards the question whether disease is ever introduced into the body by vaccination, Dr. Martin adopts the general opinion of the profession, that in extremely rare cases syphilis may be inoculated when humanized virus is used. Also that with this latter virus a form of erysipelas, generally slight, but in rare instances fatal, may follow. He thinks, however, that these two sequelæ may be done away with by using pure animal virus. We can hardly agree with this latter conclusion, since cases of erysipelas undoubtedly occur, not so very

rarely, after the use of the bovine virus supplied now in this city. It is Dr. Martin's opinion, however, that such results indicate an impure virus.

As regards the effect upon the subsequent general health, there is no evidence whatever that the vaccine virus affects it in any way. Vaccinated calves, after their pocks have healed, are said to be exceptionally healthy and to fatten easily.

Dr. Martin concludes his article by reviewing the facts in his own experience. As the result of exceptionally large opportunities of observation during a professional career of forty years, he says: "I have never known among those whom I have vaccinated a single case of small-pox in any form or modification, except a certain limited number into whose system the germ of the disease had entered before the time of vaccination. I have never seen or suspected in my own practice one such case as Mr. Bergh asserts to exist by millions. I have never had a patient die in any way that could be directly or indirectly attributed to vaccination. I have never had the slightest reason to even suspect, in a single instance, that vaccination had in any way impaired or deteriorated human vitality, but have seen several cases in which, besides preventing small-pox, it was the means of carrying off certain trivial ailments, and of improving the general health of the patient." He concludes: "I have heard of a school that is not

> "'Any school
> But that where blind and naked ignorance
> Delivers brawling judgments, unashamed,
> On all things all day long.'

Is Mr. Bergh, perhaps, one of its recent graduates?"

THE TOXIC EFFECTS OF IODOFORM.

Hardly has the announcement been made that iodoform is a valuable antiseptic application to operation-wounds when cases are reported proving its positive toxic effects. The paper of Professor Sands in the present issue gives some very interesting facts in this direction, and helps to corroborate a similar experience on the part of several German surgeons. It seems to be settled that, contrary to what was at first supposed, iodoform has positive toxic properties, and that it is quite necessary to use it with becoming caution. The cases related by our contributor are striking and instructive, and his comments on them are deserving the most careful consideration of all who have been inclined to make a free use of the drug upon freshly cut surfaces. The warning is timely, and will be heeded accordingly. Under certain circumstances iodoform is a most effective antiseptic application, and the great pity is that it has associated with it such a serious drawback. It is quite evident that cases should be selected with reference to certain wound conditions, and then the drug should be employed only in reasonable quantity. It appears to be safer when it is applied to open granulating surfaces than to fresh wounds. In fact, for more reasons than one, it does not seem to be applicable to wounds which are subsequently closed as on such in which union by first intention is looked for. Then again, idiosyncrasy appears to influence its toxic effects, as shown when very small quantities have been used with bad results. Thus far comparatively few cases of poisoning have been reported. They are sufficient in number, however, to be significant.

Some time ago, Oberländer (*Deutsche Zeitschrift für praktische Medecin*, xxxvii., 433) observed two cases of poisoning caused by iodoform administered internally. In one case 42 grammes were given in eighty days. The symptoms were vertigo, prostration, nausea, and vomiting; later, emotional excitement alternating with somnolence, spasm of the facial muscles and irregular respiration. In the second case, similar symptoms followed the use of 5 grammes, taken within a period of seven days. Both patients recovered.

In Billroth's clinic, Mikuliez (*Langenbeck's Archiv.*, vol. i., 1881) met with several cases of acute intoxication of a mild character, and two chronic cases that ended fatally. Case 1 was a child, aged nine, in which a cold abscess of the thigh was opened, scraped, and filled with 40 grammes of iodoform. Bad symptoms appeared on the twentieth day—death on twenty-eighth. Case 2 was a child of five years of age, in which resection of hip had been performed, the wound was filled with 120 grammes of iodoform; symptoms of meningitis appeared on the twentieth day, and death on the twenty-fifth day. The autopsy showed no lesions.

Henry (*Deutsche Med. Wochenschrift*, 1881, No. 34), reports two fatal cases (1), a man, fifty-seven years of age, intemperate; (2), a woman aged sixty-three years, weakly. Both operations were for caries. In No. 1, 150 to 200 grammes were used; two days later cerebral symptoms appeared, and death occurred six days after operation. The symptoms were not those of mania, viz.: headache, drowsiness followed by coma, rapid pulse, and paralysis of sphincter. In case 2, same symptoms, on ninth day, after employment of 100 to 150 grammes; death sixteen days after operation. Autopsy showed fatty degeneration of heart, cloudy swelling of liver and kidneys.

Schede, of Hamburg (*Centralblatt fur Chirurgie*, January 21, 1882), gives fatal case of a child, aged nine years. The operation was for resection of hip. The wound was filled with iodoform; three weeks later cerebral excitement was followed by coma, and death after four days' illness. The autopsy was negative.

Hoeftmann (*Centralblatt, etc.*, February 18, 1882), out of one thousand cases, had two of poisoning, both fatal. Case 1 was extensive wound after extirpation of recurrent mammary cancer; the quantity of iodoform used was 35 grammes. Mania occurred on the third day and death on the ninth day. There

was no autopsy. Case 2 was one of ovariotomy, 20 grammes applied; mania occurred on the second day and death on the third day.

Koenig (*Centralblatt, etc.*, February 18 and 25, 1882) reports thirty-two cases; fifteen of slight intoxication, six severe, seven fatal (all adults); and four cases of children, two fatal; smallest quantity used in fatal cases, 10 to 15 grammes.

It is quite important that other surgeons should report cases which have suffered from the poisonous effects of the antiseptic, in order that the indications for its employment may be clearly marked out, and its evil effects guarded against. It is certainly an efficient antiseptic in proper cases, and should not be discarded without further trial.

THE REPORT OF THE SENATE COMMITTEE UPON INSANE ASYLUM MANAGEMNENT.

THE committee appointed by the State Senate two years ago to investigate insane asylum management in this State has made its report.

It is very gratifying to find that, as a result of their two years' study of the subject, conclusions are reached which directly contradict the report of the previous committee, and which affirm nearly all the points claimed in the RECORD and elsewhere against asylum management in this State.

The report, which is a brief but lucid document, contains a number of propositions regarding the general and special problems of insanity. Most of these are not new to medical men, but it is an evidence of progress that they are understood and announced by a committee of laymen.

The increase of insanity is referred to, and its disproportionate increase is accepted as a fact. It is stated also that there is a disproportionate increase among the pauper insane, and also of the "borderland cases" and of the slightly or partially insane. The prospects of ever curing any large per cent. of the insane are thought to be poor. Efforts should be directed, therefore, rather toward preventing it.

The defects of our State asylums are then rehearsed. The lack of humanity and of economy are said to be the especial defects in their management. The insane are not sufficiently provided with employment, amusement, or freedom. The superintendents are rigidly conservative, and refuse to appropriate the more recent methods of caring for their patients. The money expended in building the asylums cannot, of course, be replaced; but it is recommended that for the future more economical buildings be constructed, and that, so far as possible, the chronic insane be cared for separately.

The establishment of small local asylums attached to the county jail or poor-house was not recommended, since what would be gained in expense at first would be lost afterward.

The most important part of the committee's report was the emphatic recommendation for the establishment of a State Lunacy Commission. This commission "should be given ample powers to look after the interests of the State in the matter of expenditure and to protect the patient in the matter of physical care, with full powers to redress all grievances and remedy whatever wrong they may discover.

Viewing the report as a whole, we can make very little criticism of it, except that it lacks somewhat in detail, and that its view of the increase and incurability of insanity is presented in only its darkest light. It would have been well, also, if the committee had presented the problem of the State care of the insane in the definite form suggested by Dr. Dana in a paper read recently before the National Association for the Protection of the Insane. According to this, our legislators should bear in mind that there is and will be in this State one insane person to four hundred or three hundred and fifty sane, and three-fourths of these need to be provided for in public institutions.

ON THE USELESSNESS OF SOME OF OUR ORDINARY DISINFECTANTS.

SOME time ago, in commenting on certain contributions to the subject of disinfectants, we called attention to the inaccuracy and incompleteness of the present knowledge regarding them. This, as we then averred, is a matter for regret; for, whatever position micro-organisms finally take in our pathology, the usefulness of disinfectants will not be questioned, and it is of the highest importance that their exact power be known.

In an official volume just issued by Dr. Struck, Chief of the Sanitary Department of Germany, Dr. R. Koch has published the results of his studies upon disinfectants, and has contributed to the subject much that is new.

Koch used, in order to test the value of a disinfectant, the micro-organisms of splenic fever. Splenic fever is a septic disease of a low specific character. Its organisms exist in the form of minute, round spores or micrococci, which afterward develop under favorable conditions into slightly larger, rod-shaped bodies or bacilli. It was found, though this indeed was already known, that the spores had a much greater vital resistance than the bacilli.

Two per cent. solutions of carbolic acid, after three days' contact, only *hindered* the development of the spores, but even five per cent. solutions did not kill them. On the other hand, one per cent. solutions killed the bacilli within a few minutes. Furthermore, one part of carbolic acid in 1,000 parts of beef-broth prevented the further development of bacilli.

These are important facts, since they show a source of error in former experiments. It has been stated by Endemann, Sternberg, and others that

carbolic acid solutions of about two per cent. strength destroy the activity of low organisms. But this, if Koch's experiments are correct, evidently cannot apply to all organisms, or to every life-form of the same organism.

The many surgeons whose favorite application has been carbolized oil will be surprised at Koch's assertion that "carbolic acid dissolved in oil or alcohol has not the slightest disinfecting power"—meaning, it is presumed, upon splenic fever and allied septic organisms.

Koch tested the power of sulphuric acid, chloride of zinc, borax, white vitriol, and other substances. He found them absolutely incapable, in any ordinary solution, of killing the spores. Such substances as arsenic, quinine, and perchloride of iron would, in one or two per cent. solution, kill the organisms in the course of six or ten days, but were, on the whole, quite feeble disinfectants.

On the other hand a few substances only were found to be very active. Thus, two per cent. solutions of bromine, iodine, and chlorine, and of corrosive sublimate (the last being the best) killed the spores within a day. The power of these latter substances to prevent the activity and development of the bacilli was found to be very remarkable. Thus, one part of sublimate in 500,000 of water would completely check the activity of the organisms. Certain volatile oils, such as thymol and terebinthene, were also efficient in dilutions of 1 to 80,000 and 1 to 70,000.

As the result of his experiments, Koch came to the conclusion that only bromine, chlorine, iodin sublimate, and the few oils of the class referred to were of value as disinfecting agents.

HOSPITAL EXAMINATIONS.

The season for hospital examinations has commenced and numerous candidates are presenting themselves for interneship. Competition for these positions is so active that a high standard of qualification is guaranteed to such as successfully pass the boards. In not a few of our hospitals the standard is equal to that of entrance to the medical staff of the army and navy, and, in fact, several who have failed in obtaining appointments in the metropolitan hospitals have successfully passed the ordeal of one or other of the Government examinations. It is not a little surprising to find how well up in the fundamental branches are the majority of candidates who present themselves for the hospital examinations. There is not room for all the good men who qualify for them. With the opportunity of making selections from the best, it is no wonder that the gentlemen who compose the house staff of our larger hospitals are such as the colleges and the profession may be proud of. The examination for these positions are strictly impartial, and the successful candidates are generally quite equally apportioned from the three leading schools.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 8, 1882.

Dr. George L. Peabody, Vice-President, in the Chair.

Dr. Tauszky presented a specimen of

LACERATED BLADDER,

which he had obtained through the courtesy of Dr. Waterman, Deputy Coroner. It was accompanied by the following history:

Wm. McG——, thirty-two years old, Irish, single, was brought to St. Vincent's Hospital February 26, 1881. He had been to the Northern Dispensary, and there a rupture of the bladder was diagnosed. On admission to the hospital the patient could not give a correct history of his case, but thought he was injured in the abdomen by some one falling on him while he lay intoxicated in a saloon. He complained of retention of urine. A catheter was used, and a quantity of bloody urine drawn off. It was necessary to use the catheter every six hours to relieve his distress; but after a few days the urine began to assume its natural color, yet on standing for some time would show a deposit of blood. The amount drawn each time was considerable. The instrument, a silver cather, had to be introduced up to the rings before the urine could be drawn, which at the time was noticed by the physician in charge as very peculiar, and even then it required some manipulation after the instrument had passed the normal distance, until the instrument would suddenly pass farther and the urine would flow. The man died of asthenia March 3, 1881, at 3 P.M.

Autopsy, performed at the hospital March 4, 1881. Body well nourished. Intestines slightly injected, and only very slightly roughened on the surface of the transverse colon. *Peritoneum* slightly thickened and only slight injection of vessels. There was considerable fluid in the peritoneal cavity, with an ammoniacal smell, but not markedly so; there was also infiltration in the tissues in the neighborhood of Poupart's ligament, especially in the lower portion of both recti abdominalis muscles, which had a sloughy appearance. The *bladder* was about two inches in diameter, contracted, and its surface was corrugated. It had a marked bluish color, verging upon a gangrenous appearance. There was a horizontal rupture of the walls of the organ, commencing a little to the right of the fundus and passing to the left nearly to the neck; the edges of the rupture appeared not of recent origin, and at various portions the internal and outer edges had cicatrized; but in the course of the rupture the mucosa of the bladder had an inverted appearance, inversion taking place toward the body of the bladder. Upon and underneath the membrane lining the bladder were a large number of small cysts filled with bloody serum.

Dr. Tauszky remarked that the fact that the patient had only a circumscribed peritonitis while under the treatment of Dr. Stephen Smith, with an extensive laceration of the bladder from February 26th to March 3d, and the tendency of the rupture to heal, seem to show the correctness of the view first enunciated by Prof. Simon, of Heidelberg, that healthy urine does not prevent the healing or union of incised or other wounds with which it comes in

contact. This fact he had seen corroborated in the New York Woman's Hospital, where, on account of otherwise incurable cases of cystitis, artificial vesico-vaginal fistulæ are made, and, as Dr. Emmet expresses it, do what we may these artificial vesico-vaginal fistulæ will usually close in about ten days. Another important question in connection with this case is whether laparotomy and the sewing up of the bladder at the time the diagnosis was made would not have saved the patient's life.

Dr. J. C. Peters remarked that in the third volume of the "Transactions of the Society" were reported by Dr. Erskine Mason and others a large number of cases of rupture of the bladder.

Dr. Wyeth presented a patient on whom he had performed

EXSECTION OF THE ANKLE-JOINT.

About thirteen years ago the young lady sustained an injury of the ankle-joint which was followed by suppurative arthritis and necrosis of the bones entering into its formation. She had been unable to walk on that limb ever since. She was brought to him by Dr. J. G. Wallach for operation, which was performed in the latter part of June, 1881. Parallel perpendicular incisions were made on either side of the joint down to the malleoli, and then out upon the tarsus for two inches. The periosteum was raised, and about three-fourths of an inch of the fibula and tibia, and the upper part of the astragalus were removed by means of a delicate chisel. The remainder of the astragalus was then brought in contact with the ends of the bones of the leg, drainage-tubes were inserted, and the wound closed by silver-wire sutures. The patient was now able to walk with ease; the joint admitted of flexion and extension and lateral motion. There being slight shortening of the limb, a high-soled shoe was worn on the foot of that side. The patient's appearance was in marked contrast with what it was before the operation; then she was pale and thin, now she was rosy and healthy. The patient also had a rare murmur, which Dr. Janeway considered to result from a communication between the aorta and pulmonary artery, possibly through a previous ductus arteriosus; it was possible, however, that the murmur produced was caused by a communication between the innominate vein and the aorta. In consequence the patient sometimes suffered from syncope.

REMOVAL OF BONY TUMOR OF UPPER JAW THROUGH THE MOUTH—VALUE OF MORPHIA-NARCOSIS, ETC.

Dr. Geo. F. Shrady presented a specimen of osteoma of upper jaw, which he removed by operation through the mouth. The patient, a female, aged about thirty-nine years, was sent to Dr. Shrady in June last by Dr. Frederic J. Starr, a dentist of this city. For three years previously a tumor had been growing on the left side of the upper jaw, apparently having its origin in the root of the first molar. When she presented herself for operation, the growth involved the entire alveolar margin of that side, from the internal aspect of the canine fossa in front, to the maxillary tuberosity behind, including the latter in an expanded knob of osseous tissue. Internally it extended nearly to the median line of the roof of the mouth and hard palate. Externally its projection (most marked in the neighborhood of the first molar) extended beyond the perpendicular plane of the malar bone, while its upper limit corresponded with the horizontal plane of the lower border of the malar process of the superior maxillary. There was marked deformity of the face, consisting of a protrusion of the corner of the mouth, a flattening of the naso-labial fold, and a marked prominence of the cheek. The projection from the maxillary tuberosity extended so far downward as to impinge upon the contiguous margin of the lower jaw and interfere with easy deglutition, while the contractions of the masseter muscle over the prominence were at times quite painful. The diagnosis of osteoma of the jaw was made without difficulty.

The operation was performed at the St. Francis Hospital, in the presence of, and with the assistance of Prof. Howe, Drs. D. W. Goodwillie, Satterthwaite, F. J. Starr, and members of the House Staff. An hypodermic injection of ten minims of Magendie's solution was administered previous to etherization, in order to enable the patient, while under the influence of morphia-narcosis, to clear her mouth of blood during the operation.

A gag was then introduced on the right side of the mouth, and the left cheek firmly retracted. The periosteum was carefully separated from the external aspect of the tumor as far back as the pterygo-maxillary fissure, and a corresponding flap raised from the roof of the mouth and palatal bone. A horizontal section of the external surface of the tumor was made with a metacarpal saw, high up underneath the malar process, extending backward to include the corresponding portion of the maxillary process. The bony roof of the mouth, just external to the median line, was sawn through, and finally Goodwillie's saw, which is provided with a bracketed shank to receive the cheek, was inserted behind the maxillary tuberosity in the pterygo-maxillary fissure, and carried upward to the horizontal level of the attachment of the tumor. The blade was then adjusted flatwise, and the remaining attachment of the growth was sawn through horizontally from behind forward.

The hemorrhage was quite profuse, especially during the time of separating the deeper and posterior portions of the tumor, but was promptly controlled by pressure. The patient, during the operation, readily responded to directions to spit out the blood which accumulated in her mouth. In the latter part of the operation the patient's head was hung backward over the edge of the table, thus effectually preventing the entrance of blood into the trachea. The periosteal flaps were suitably trimmed, and their edges stitched together to form a new gum. Nearly the entire wound united by first intention, and within one week the patient was able to leave the hospital. Six weeks afterward the parts commenced to solidify, by the deposit of new bone, and three months subsequently the side of the jaw and bony roof of the mouth were so perfectly and symetrically reproduced, that the dentist, Dr. Starr, was enable to make for her a set of teeth, which, according to his account, she is now wearing with "comfort and satisfaction." The tumor was homogeneous throughout, was composed of condensed bony tissue, and in its thickest portion was eburnaceous in character. Its focus of origin appeared to be in the neighborhood of the fang of the first molar, where the bony condensation was most marked, and the eburnaceous character most pronounced.

The interesting features of the case were: 1st, the character and situation of the tumor, osteomata of that size growing from the upper jaw being very seldom met with; 2d, the possibility of removing these growths through the mouth without section of the cheek, and without preliminary tracheotomy; 3d, the advantage of morphia-narcosis in all opera-

tions about the mouth attended with much hemorrhage; 4th, the utility of the backward hanging of the head (Rose's position) in preventing the entrance of blood into the trachea; 5th, the readiness with which bone is reproduced after similar operations, and the great utility of Goodwillie's saw in making difficult sections of bony parts deep in the mouth. Without this instrument the performance of the operation, in the manner indicated, would have been scarcely possible.

Dr. Wm. H. Draper presented a specimen of

INTESTINAL OBSTRUCTION.

The interesting features of which were with regard to its clinical history. *First*, the patient, a clergyman, was vigorous and of great activity up to the day of his illness, complaining only of very slight indigestion; *second*, he had no pain, and complained only of a vague, indescribable feeling of discomfort in the abdominal region (vomiting occurred later); *third*, in corroboration of the views entertained, rather by English authorities than by others, was the paucity of urine, which suggested the probability of intestinal obstruction high up in the small intestine. That view was strengthened by the fact that at first there was no considerable distention of the bowels, they being flaccid and easily manipulated. No considerable distention occurred until after the sixth day of his illness, and it was probable that by that time the obstruction had made considerable of its descent. Had the subject been young it was probable the surgeons would have advised laparotomy; but the manifest degeneration of the patient's tissues, afterward proven by microscopical examination, and the great obscurity with regard to the nature and seat of the obstruction, he thought justly deterred the surgeons from operative interference. He believed the view entertained with respect to the nature of the obstruction by most of the physicians and surgeons was, that it was due to a malignant growth with fecal accumulation. But the autopsy revealed that it was due to a gall-stone.

Dr. John A. Wyeth said it was a question of importance in such cases to determine whether, or at what time, an operation was justifiable. This was one of the cases in which he thought delay was dangerous, as the result proved. He had had a case which was just recovering in which delay was attended with success. A gentlemen about sixty years of age, of sendentary habits, had an obstruction seemingly in the right iliac fossa. Four days had elapsed without any movement of the bowels, previous to his seeing him, and there was evidently a great deal of gas in the abdominal cavity above this point, an injection produced no apparent effect. Drs. Sands and Janeway were called in consultation as to the propriety of an operation, and it being deemed proper, Dr. Wyeth considering that it was dangerous to delay, the time for its performance was set for the next day. That night, however, a hypodermic injection of fifteen minims of Magendie's solution of morphia was administered, the patient was placed on his right side with a downward slope of the shoulders of thirty or forty degrees, and nine pints of warm water were slowly injected into the colon. Being unable to stand the distention any longer, twenty-four minutes after the injection was made the patient got up and passed about four pints of the water from the lower part of the colon, but it contained no fecal matter. After twelve hours another discharge from the bowels took place, composed of about a pint of very feculent coffee-ground matter, and from that time the obstruction was relieved. There had been no stercoraceous vomiting at all, else he would have operated before the time appointed.

Dr. Peters referred to the fact that the acetate of lead had been reported by good authorities, first in Thurgood's "Materia Medica," as acting favorably for the relief of intestinal obstruction.

Dr. Peabody remarked that in Thudicum's work on "Gall-stones," were related several cases in which recovery from intestinal obstruction took place, with the passage per rectum of the calculus, it being in one instance much larger than the present specimen.

Dr. Peabody presented

THE HEART, KIDNEYS, BLADDER, AND PENIS

removed from the body of a man aged thirty-four, who died of pneumonia, after three days' illness. There was nothing unusual in the course of the pneumonia. Nothing told by the patient would lead to the suspicion of Bright's disease; but there was a history of intemperance. The urine contained albumen and casts, and, although not deficient in quantity, it was of low specific gravity. At the autopsy there was found to be a slight lesion of the aortic valves, the cusps being quite distinctly adherent. The kidneys were in a state of chronic diffuse nephritis, the right one being far the most atrophied. Hydronephrosis was also well marked in the right kidney. From that organ arose two ureters, one from the ordinary situation, about the middle of the kidney, the other from its lower extremity. The two ureters proceeded side by side to the bladder, and entered the viscus at the same point. One, of them, however, became largely dilated before entering the bladder, forming a sack, the tissues of which resembled very much those of the bladder itself; that is, it was lined by a mucous membrane, and its walls were composed of muscular fibres. The bladder was markedly hypertrophied, although there was no stricture of the urethra, a fact which seemed to him at first remarkable. It probably could be accounted for by the fact that the bladder had, as it were, to expel a double amount of urine, although the patient passed only a normal quantity; that is, all the urine secreted had to be expelled by the urethra, part of it having been previously expelled in an upward direction into the dilated ureter, and having again subsequently entered the bladder after the contraction of that viscus had subsided. The condition of double ureter, he believed, was not of very infrequent occurrence. He found an example of it at the autopsy on an infant recently.

Dr. Gerster presented a specimen of

MALIGNANT LYMPHO-SARCOMATA OF THE NECK.

The patient from whom it was removed was a man, thirty-three years of age, who for some time had a bad tooth, but refused to have it removed. Caries of the alveolar process followed, and in the course of time the glands in the submaxillary region of the same side took on inflammation, but did not suppurate. After six months, without any known cause, they began to grow rapidly, and three months later he presented himself at the German Dispensary, when it was found that the tumor had become as large as one's fist. It was immovable, attached to the cervical vertebræ on the right side, and apparently involved all the important organs of the neck on that side. The patient was very anxious to have it removed, so as to free him from great pain and difficulty of breathing. He was promised little

hope from the operation, which would be a difficult one, but it was undertaken. The attachments of the tumor were found to be very close indeed, and formidable hemorrhage was encountered. The method pursued in this case, as in all similar cases, was that advised by the elder Langenbeck: expose the large vessels leading to the tumor, and pass ligatures ready to tie them in case hemorrhage demand it. A dense fibrous mass, which occupied the position of the internal jugular, but thought by Dr. Shrady and others present not to be it, was ligated and divided, and afterward found to be that vessel in an obliterated condition. Two hours elapsed before the bifurcation of the common carotid was reached, and the patient's state by this time being such as not to admit of completing the removal of the tumor by careful and clean dissection, it was broken away by main force from its underlying base, and the remaining parts were removed, as far as possible, by the scoop. Had the patient's condition permitted, he would have ligated and severed the carotid artery, and cut the pneumogastric nerve, and removed the whole mass. Death took place thirty-eight hours after the operation, and was due to shock and loss of blood.

Dr. Gerster also gave the history of nine additional cases of this disease, which had come under his observation during the past three years, particularly with reference to the treatment. Seven of them were treated by the internal administration, and injections into the tumor of Fowler's solution of arsenic before operative measures were resorted to. A perfect cure from this method was observed in but one case.

In the second case the patient was a German woman, aged fifty-seven, who had a solitary tumor of irregular shape, and about the size of one's fist, situated on the left side of the neck. In the course of nine months about fifty sittings were had, commencing with one drop three times a week, and increasing the quantity to four, from four to five, such injections being made at one sitting into different portions of the tumor. The lymphatic elements, of which the tumor was composed, one by one necrosed, and were removed through the skin, as many as twenty-five incisions being made altogether for their removal, with that of pus. The tumor had disappeared, but of course the neck remained badly scarred.

The third case was that of a girl, aged eighteen, who had three tumors, as large as a turkey's egg, on the right side of the neck, also enormous tonsils, which were at once removed. The treatment was continued fourteen months, but by injections only half a year. The tumors diminished to about one-third their former size, due, it was thought, to the systemic rather than to the local effects of the drug. What remained of the tumor seemed to consist principally of the dense, massive cicatricial capsules of the glands.

Case IV.—A Dane, aged twenty-one, very florid, strongly built. Large tumor on right side of neck, the causation of which was not known. Treatment by injections and increasing internal doses of Fowler's solution for three months at the German Dispensary. Four incisions were made, evacuating much pus and some solid necrosed glandular tissue. Partial cure.

Case V.—F. C——, mechanic, aged twenty-eight, a cachectic-looking individual, whose skin was marked in many places with pigmented nævi, had a soft, almost fluctuating tumor on the right side of the neck, reaching from the mastoid process down to the sternum. The axillary and inguinal glands on both sides were also markedly larger than normal. An operation being out of question, Fowler's solution was exhibited internally and locally. Cachexia was combated by a suitable dietetic treatment. After about two weeks of treatment, the tumor became still more enlarged and painful, causing fever and dyspnœa, but after the evacuation of a large quantity of pus from the deeper parts of the swelling by incision, it shrunk to about half its former size. The patient becoming aware of a chance to return to Germany, the opportunity of completing this case was unfortunately lost. Treatment had lasted for five months.

Case VI.—A powerful, healthy mechanic, aged twenty-two, presented himself with a well-defined, freely movable tumor, occupying the right side of his neck, which had its origin in a glandular inflammatory swelling caused by a carious tooth. The tumor was very hard, smooth, painless, but had grown rapidly, wherefore an immediate operation for its removal was proposed to but declined by the patient. A year later he had himself admitted to the German Hospital, and presented a sad example of physical decline. The original tumor had enlarged so as to fill up both the upper and lower triangles of the neck; general intumescence of the cervical, axillary, the inguinal and mesenteric glands, was ascertained; the patient was in a state of grave cachexia, feverish, and had lost all appetite. A systemic treatment of the disorder by internal administrations of Fowler's solution, iron, and quinine was attempted, but the patient's state went from bad to worse, and he died at his home two years after the incipiency of his illness.

The second group of cases observed contained those in which operative measures were resorted to. The first case belonging to this class was disposed of in the beginning of this report. In that case no treatment with Fowler's solution was employed. In two of the operative cases, however, the arsenical treatment being resorted to, quite different results were obtained therefrom. One case showed a marked temporary benefit, the other most undoubted aggravation of the trouble.

Case VII.—Mrs. H——, a very anæmic German woman, aged twenty-six, had borne in rapid succession five children. A very large, soft tumor, consisting of many glandular segments, occupied the right side of her neck; causation was not ascertained. The usual treatment with injections and the internal administration of Fowler's solution was instituted, and in the course of four months five glandular bodies, presenting a cheesy appearance, were extracted from abscesses after incision, and the patient's condition seemed to be materially improved. After a four weeks' pause, the remaining parts of the swelling again commenced to enlarge, and thereupon excision was practised. An incision extending from the mastoid process to the jugular fossa exposed the tumor, which had to be dissected away very carefully by the use of the knife and scissors throughout its whole extent. The internal jugular vein was found involved, and an inch and a half of its length had to be removed. By accident, the pneumogastric nerve was grasped by an artery forceps during the time of dissecting away the jugular vein, but the colleagues supervising the anæsthesia did not notice any unusual change in pulse or respiration during these three or four minutes. The operation lasted almost three hours, but the patient recovered well, and the extensive wound, at the bot-

tom of which a large portion of the carotid lay exposed, healed by first intention, except at the places where drainage-tubes had been inserted. Nevertheless, six months after the operation the disease became generalized, the spleen had become enormously intumescent, likewise the mesenteric glands, which produced marked obstruction of the transverse colon. The patient died of cachexia one year and a half after the removal of the tumor.

Case VIII.—Wm. R——, a German grocer boy, aged seventeen, exhibited a movable tumor of the size of a hen's egg, placed in the right upper cervical triangle. Causation from a carious tooth. Here, also, Fowler's solution was injected four times, causing, however, a more rapid growth of the swelling without fever, and the involvement of numerous neighboring glands. A very clean and thorough dissection of the new-growth, including its capsular envelope, was accomplished. The jugular vein and carotid lay exposed to the extent of two inches. The wound healed kindly, and principally by first intention, and yet a relapse became apparent two months afterward, involving some glands lying above the clavicle. These were again removed, but before the wound had cicatrized, the corresponding glands on the other side of the neck, and likewise the axillary and inguinal glands, became degenerated, and the boy is now in a dying condition.

In the remaining two cases no treatment with arsenic was resorted to for different reasons.

Case IX.—Miss B——, a very anæmic, rachitic shop-girl of eighteen years, observed three discrete tumors, of the size of a pigeon's egg, in her right submaxillary region, caused by the presence of some foul teeth, which were growing rapidly and disfigured her considerably; wherefore she declined the arsenical treatment, and accordingly was operated on. Dissection was difficult, as usual where the rule is adhered to, to remove both the glandular swellings and their dense, vascular capsules. The recovery was prompt, and no relapse had appeared so far—almost three years after the operation.

This good result seems to indicate that all indolent, painless, but rapidly growing swellings of the cervical glands, be they caused by the presence of carious teeth or some other circumstance, ought to be removed without delay, and thoroughly—that is, together with their capsular envelopes.

Case X.—R. S——, laborer, fifty-seven years of age, noticed a glandular swelling in his right submaxillary region, when suffering from an ulcerated tooth, which did not inconvenience him much after the removal of the tooth, but commenced to grow rapidly six months after without a known cause. The tumor had the size of a small orange, and was closely adherent to the inner aspect of the ramus of the jaw. It was removed in January, 1881, together with a lamella of the adherent bone. In August of the same year a relapse necessitated the removal of the right half of the lower jaw, together with the right side of the floor of the oral cavity and a portion of the right side of the tongue. The tongue was sutured to the remaining parts of the buccal mucous lining, the wound was treated with an eight per cent. solution of chloride of zinc, and closed by cutaneous sutures, and healed rapidly; but three months after the operation another relapse took place, occupying the spheno-maxillary fossa, and forbidding further operative measures. The patient is now in a state of imbecility, and rapidly approaching death.

Experience gathered in the foregoing ten cases seems to point, in a majority of instances, to the fact that the beginnings of this terrible disease are developed by inflammatory processes; though of course the cause remains unexplained, why the inflamed glands do not show the usual course leading to resolution or suppuration and consequent healing, but develop into an illness leading, in most instances, to sure death.

Further, we see that in a number of cases the combined external and internal arsenical treatment is capable of producing considerable, if not radical and lasting benefit; but that sometimes it will aggravate the disease considerably. Then, again, we see that early and thorough operative measures do promise favorable results, and that operations, however extensive and seemingly radical, will give but poor satisfaction in well-developed and extensive cases. Finally, it could be seen that the technical difficulties of the more extensive operations for these tumors were so great that, although most of the patients did recover remarkably well from the effects of the bloody measures, surgeons who refused to interfere in similar cases seemed to be justified in their course by the preponderatingly unsatisfactory results.

Dr. Tauszky remarked that in 1873 he saw a case of this kind which was being treated by the arsenical method. It was commenced with one drop, and increased up to ten. After the sixth week the tumor entirely disappeared, but about five months later a relapse occurred. The same treatment was again resorted to, with similar good results, and he then lost sight of the patient.

Dr. Wyeth remarked that Dr. Frank H. Hamilton reported a favorable result from the arsenical method in a case published recently in the *Medical Gazette*.

Dr. Parker had had three cases within the last three months, all on the left side of the neck. In one very severe case, in which an operation was advised by Dr. Willard Parker, Sr., the tumor was removed with the assistance of Dr. Stimson. The patient finally died. In the case of a robust young man, on whom an operation was refused to be performed at the New York Hospital, he removed a very large tumor, necessitating an incision from the ear down to the sternum. No relapse had occurred, and the patient was robust and healthy. It was a little singular that, in most cases, it seemed the tumor occurred on the left side.

Dr. Seguin asked what was the object of the arsenical injection, whether to produce a local irritative effect, or an effect upon the constitution.

Dr. Gerster replied that the object which Billroth, who introduced this mode of treatment, had in view was to produce both these effects—namely, by injections to destroy the growth as far as possible, and administered by the stomach to get the constitutional effects which might tend to produce molecular destruction of the new tissue formation.

Dr. Seguin said that in order to get the constitutional effects larger doses of Fowler's solution would have to be given than what he understood was given in these cases, viz., four or five drops. Four minims produced no effect at all scarcely upon the system in cases of chorea, while fifteen to twenty minims were borne well.

Dr. Gerster said the amount given internally was much more than four or five drops; thirty, and even forty minims were given three times a day to some of the patients without any ill effects.

Dr. B. Robinson said that in a case of tumor of

the neck in a child at St. Luke's Hospital this mode of treatment had arrested further growth during the time of his service; it then passed from under his observation.

Dr. B. Robinson presented a specimen of

PERICARDITIS HÆMORRHAGICA.

It was removed from the body of a woman, aged forty years, admitted to Charity Hospital. January 29, 1882, Dr. Robinson saw her, and found her in the dorsal decubitus with blue lips and respiration laborious and frequent. Physical examination revealed flatness over the left side of the chest anteriorly, laterally, and posteriorly. There was œdema in the left axilla, the veins of the neck were turgid, and those on the surface of the thorax were abnormally marked. On auscultation some moist bronchial râles of large size were heard over the chest anteriorly. The apex of the heart could not be felt. The organ was pushed upward and toward the axilla. There was a considerable area of diffuse pulsation. A loud rasping bruit preceded the first sound, was apparently endocardial, and heard with great intensity over the entire length of the sternum, and in the second and third intercostal spaces on the left side. It was not propagated into the left axilla, nor heard over the back, at which place respiratory murmur was also absent. About twenty ounces of straw-colored fluid were removed from the left pleural cavity by Dr. C. H. French, House Physician, and the patient was temporarily relieved. The murmur persisted after removal of the fluid.

The autopsy was made by Dr. Maxwell, twenty-eight hours after death.

Head.—Not examined.

Thorax.—Left pleural cavity nearly filled with a reddish yellow effusion. Upon right side a few slight adhesions. The left lung, lower lobe, and lower portion of the upper compressed, contained no air, smooth, yellow, and shining. Few fibrous nodules in upper lobe as well. Right lung œdematous, bronchi contains a yellowish brown muco-pus.

Pericardium.—Distended with fluid, measures six and three-fourth inches base, and vertical. Fluid is thin and yellowish brown. Both visceral and parietal layers of pericardium are shaggy from a layer of fibrous exudation, a line in thickness, and this exudation is almost everywhere of a yellowish color, save round base of heart, where it is hemorrhagic and grouped in spots.

Heart.—Heart weighs fifteen ounces. Right cavities are distended with dark soft coagula. Left cavities are empty, dark, and dry. Both tricuspid and mitral orifices are larger than normal, but no evidences of disease of valves; aortic valves normal. Aorta shows a few patches of endarteritis.

Peritoneal cavity contains no fluid.

Liver.—Weighs five and one-half pounds, considerable thickening of capsule, old perihepatitis. Surface markedly lobulated, of yellow color. Gall-bladder is contracted and thin over large biliary calculi,* one of these has produced ulceration and perforation in two places of its walls. Upon section there is old chronic hepatitis. In other places the acini are larger, of yellow, brownish white color, whose borders are marked by a lemon yellow zone.

Spleen.—Enlarged, softened.

Kidneys.—Chronic diffuse nephritis with congestion.

Dr. Robinson asked whether, since there was no disease of the valves of the heart or endocardium, the bruit might not have been due to coarctation of the heart orifices due to pressure of fluid in the pericardium. It was well known that diagnosis was sometimes made of organic disease of the heart from the presence of a murmur due to temporary dilatation of the orifice of the heart, which after a time disappeared and left no symptoms whatever.

Dr. Peters said that some years ago the late Dr. Swett and the whole house staff of the New York Hospital diagnosed valvular disease of the heart from the presence of a murmur in a patient who had pericarditis, but that murmur afterward disappeared. He had seen a few cases of the kind since, but could give no explanation for them.

The society then went into executive session.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, March 1, 1882.

Dr. T. A. McBride, President, in the Chair.

Dr. W. T. Birdsall read the paper of the evening, which was entitled

A CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF LEAD-POISONING.

The speaker said that cases of lead-paralysis in which a post-mortem was obtained were so rare, and the pathology of the disease was so unsettled, that he ventured to offer the present contribution to the subject.

The clinical history of a patient suffering with lead-palsy was then given. The disease had lasted over two years, and showed itself with no unusual symptoms. (The facts regarding the paralysis are given in the discussion.) The patient finally died. A post-mortem was obtained, but under such difficulties that it was not so complete as could be wished.

The muscles were not examined, but they were not atrophied.

There was no change of importance in the brain or its membranes.

The changes were most marked in the spinal cord, from the decussation of the pyramids to the middle of the cervical enlargement. Below this point they gradually became less decided. The changes in this section were greatest in the gray matter about 4 ctm. below the decussation of the pyramids. At this part for a distance of 2 ctm. hardening did not take place well. Here there was increased vascularity. Many lymphoid cells were also present. The cells of the anterior horns were remarkably large. The only approach to a pathological change in them was in the upper cervical region. Here the outer of the two cell-groups of the anterior horns seemed to be affected, the cells being small and indistinct. The largest cells, in most cases, were normally developed. There were no positive changes in the fibres of the anterior roots, although in some cases there was an abnormal vascularity, and lymphoid bodies were seen lying between the fibres to a greater extent than usual. As regards the white columns, there was some thickening of the septa near the gray matter, and some spots of sclerosis in the antero-lateral columns. There was also a very slight appearance of sclerosis in the columns of Goll. On the whole, the speaker was inclined to consider the changes those of a very mild grade of myelitis.

A summary of the literature upon the subject of the pathological anatomy of lead-poisoning was then given. The observations and views of Bernardt, Vulpian, Friedlander, Zenker, Monokau, Morritz, Seguin, Bromwell, and others were given.

The paper being open for discussion, Dr. E. C. Spitzka, in response to a question, was told that the paralysis was bilateral, that it affected the upper extensors of the fingers chiefly, but also the index finger and the thumb. The deltoid was not paralyzed. The right side was rather the more affected. The atrophy of the cell-groups was quite symmetrical. The cells of the anterior horns were not smaller in size than normal, but the large cells seemed to be fewer in number, while the number of small cells was apparently increased. There were certainly many healthy cells, and Dr. Birdsall could not say positively that there was atrophy as regards the columns of Goll. There was an increased vascularity of that part. This increased vascularity, and an increase in the lymphoid elements were about the only changes observable.

Dr. Spitzka said that the localization of the atrophy interested him as a possible confirmation of a view previously advanced by himself, that the cell-groups of the outer part of the anterior horns innervated the extensors of the arm, and those of the inner part the flexors. Some of the reasons for this view, based on comparative anatomy, were given.

Dr. M. Putnam-Jacobi discussed the question of the mode of action of the lead. It seemed to her a fact of very great interest that the three metals, lead, silver, and mercury had the common effect, in certain cases, of producing paralysis and other indications of a direct impairment in the nutrition of the nervous tissue. This was particularly the case with lead, in the use of which, so far as she knew, no symptoms of excitement were ever observed, and in which almost all the pathological changes might be interpreted as due to interference with nutrition. The vascularity of the nerve-centres and cell-groups, described by Dr. Birdsall, might indicate a defective nutrition, since it showed, perhaps, a slackening of the blood-current. This question whether the action of the three metals mentioned was not primarily upon the nutrition, seemed of much importance in view of their extensive use medicinally.

The speaker asked whether there were any microscopical changes noted in the muscles of the intestinal walls; such as might explain the colic in lead-poisoning.

Dr. Birdsall said that no examination had been made by himself and he knew of no records of any. Dr. Birdsall exhibited microscopic sections of the cord.

Dr. Spitzka, after examining them, said that they did not, in his opinion, show the existence of myelitis. He thought the columns of Goll were quite normal.

Dr. Birdsall, in reply, reiterated his opinion that there were, probably, slight inflammatory changes. He had at first been in doubt, but more careful examination convinced him that the cord was not normal. There was a spot of softening in the cord, and this, he admitted, was very likely post-mortem. But some previous pathological change was the primary cause. As regards the question whether the lesion in lead-paralysis was primarily in the cord or in the muscles, he acknowledged that there were many cases which seemed to show that the muscles were chiefly and first affected. Still he believed that the opposite view was not without support, and was, on the whole, the more reasonable one.

Dr. Spitzka referred to the experiments of Dr. J. J. Mason on frogs. He had fed these upon lead, and produced paralysis, though not the typical one seen in man. The nerve-cells were not found to be affected in these animals.

MATERIA MEDICA SOCIETY.

Stated Meeting, Thursday, February 23, 1882.

Dr. Henry G. Piffard in the Chair.

The paper of the evening was read by Dr. Robert M. Fuller, on

THE PROCESS OF MAKING TABLETS OF SIMPLE AND COMPOUND POWDERS, INCLUDING TRITURATIONS, HYPODERMICS, ETC.

The discussion was opened by Dr. Farnham, who said that he fully appreciated the value of Dr. Fuller's preparations for dosage and administration. He obtained just as good results with the tablets of aconite, for instance, which contain one minim, as with a good quality of Flemming's tincture, and also with other preparations that he had had any experience with. He regarded it as a very convenient method for carrying about doses in a solid form, which would be very difficult to carry safely and pleasantly in a liquid form.

Dr. Fox said he had used the tablets prepared according to Dr. Fuller's process for the past two years, and felt greatly indebted to Dr. Fuller for having devised the plan.

Dr. Castle remarked that he had had some experience in making and using the tablets proposed by Dr. Fuller, from which he derived a great deal of satisfaction. He was pleased not only with their portability, but also with the facility afforded in dispensing. Even where the tablet represented a greater amount than he cared to give, he would break it up and dissolve it in water and use the solution. He had taken occasion to show his apparatus, and, so far as he was able, to describe the methods to a number of physicians who had called upon him, mostly living outside of the city. Some of them had undertaken to use them in the country, and, so far as he heard from them, had all been pleased. They felt themselves under obligation to him for telling them of it, and to Dr. Fuller for having devised the plan.

Dr. Webster said his experience in the use of Dr. Fuller's tablets had been very small indeed. Not long ago an agent of Wyeth Brothers left a quantity of their preparations at his office, and called his attention to the special advantages afforded by one kind of tablet, viz., the tablets of morphine intended for hypodermic injection, and put up in little bottles, which were made to fit all hypodermic instrument cases. They were said not to spoil, as Magendie's solution does, and needed only to be dissolved in a little water. Accordingly, a day or two afterward he (Dr. Webster) was called to a case where there was excessive pain in the eye. He proceeded to try one of the morphine tablets, but found very great difficulty in dissolving it in water. He poured out half a teaspoonful of water, put the tablet in and let it stay a little while, but it showed no tendency to dissolve. He tried to crush it with his finger; it was so hard that it would not crush. After manipulating with it for some eight or ten minutes, he finally succeeded in dissolving it. Dr. Webster thought that if all the tablets behaved in that way, they would not be very advantageous for hypodermic injection. He had no doubt that they would be excellent for swallowing, because then it mattered little how long it takes to dissolve. It may have been that these tablets had become harder than they were intended to be, and he hoped that those of Dr. Fuller would prove extremely soluble.

He also took some Wyeth tablets of pepsin and pancreatin for indigestion, and was sorry to state that they did not relieve him very much.

Dr. Purdy had extensively used the tablet triturates of Dr. Fuller intended to be swallowed, and employed them wherever the remedies could be obtained in that shape in preference to the gelatin-coated or ordinary pill. He was very much better satisfied with their effects. He did not find that they passed through undissolved, as a large number of the other pills do. The trouble was in keeping them from breaking up.

Dr. Morrow being called upon, suggested that as Dr. Piffard had a large experience with, and was an enthusiastic advocate of all the preparations of Dr. Fuller, the society would like to hear from him.

Dr. Piffard thereupon remarked that Dr. Webster had not got clearly in his mind the idea of Dr. Fuller's preparations. The Wyeth preparations are compressed powders, and are comparatively insoluble, while these preparations of Dr. Fuller are porous masses. Dr. Piffard had seen the Wyeth hypodermic tablets, and was glad to find them labeled soluble on the bottle, because he would not suspect that they possessed that property from any experience that he had had with them. Whether these tablets of Dr. Fuller will prove sufficiently soluble for hypodermic injection can only be determined by experiment. But they will prove many times more soluble than the Wyeth tablets. Dr. Piffard stated that he found the blank tablets made chiefly with the sugar of milk very convenient. When he desired to give a placebo, for example, he would give a sufficient number of these blank tablets, instead of writing a useless prescription making up one dollar or a dollar and a half worth of medicine. The triturations made in the tablet form he had found exceedingly useful as a convenient method of dosage, believing that the pharmaceutical preparation known as trituration is, for many substances, the most desirable that can be employed. He had no experience with the troches. All physicians who at all dispensed their own medicines would find them the most convenient and economical form of ready-made medicine in the market, because they are furnished at prices considerably under that of gelatin and sugar-coated pills. On the whole, he regarded this method of preparation as being one of the greatest advances in practical pharmacy that has been made of late years.

Dr. Webster was still under the impression that these (Dr. Fuller's) were called compressed tablets.

Dr. Piffard explained that the vital difference between the tablets of Wyeth Brothers and those of Dr. Fuller lay in the fact that the former being compressed, lose all their porosity, whereas the latter were very porous.

Dr. Farnham stated that his experience with the hypodermics was different from Dr. Webster's. He dissolved in ten minims of water a tablet (Dr. Fuller's) containing $\frac{1}{8}$ gr. of morphia and $\frac{1}{150}$ gr. of atropia, and got the full effect of the drug.

Dr. Castle stated his experience with the Wyeth tablets, of which a sample box was sent to him by Wyeth a short time ago. He found that some of them dissolved comparatively readily. None of them dissolved of themselves, but he had to use the free end of his syringe or the bottom of a little bottle, which served as a convenient pestle, for grinding them up. There were still tablets in the lot which would not dissolve by any amount of grinding. After a long trituration there was still left a sediment in the bottom of the spoon, which he did not feel justified in injecting into the connective tissue of his patient. He did not know whether that sediment represented any of the active element of the tablet, or whether it was a simple inert substance. He also had his attention called to another point in his experience with these Wyeth tablets. They are made with sodic sulphate as a basis. He had noticed of late that the samples he had in his instrument box had all, with one exception, absorbed moisture, so that the tablets became three or four times as thick as they were when he first got them. Whether this is calculated to injure the properties of the tablet or not, he could not say. His experience with the insolubility of certain drugs and the tendency to absorb moisture had led him to abandon them in injections.

Dr. Farnham wished to know how to get over the difficulty of making the tablets when the active principle is volatile.

Dr. Piffard informed him that the difficulty could not be overcome. The tablets of Dr. Fuller were not adapted to the administering of every medicine, but to a good many. Nearly six hundred preparations, mostly with the sugar-of-milk as a basis, have thus far been prepared. Pharmacists have dispensed, so far, over two thousand pounds, averaging three thousand tablets to the pound.

The attention of the society was next called by Dr. Piffard to certain preparations of Messrs. McIntyre & Embury, known as dialysates. They are, briefly, prepared as follows: A vessel of water being taken, into that is placed a smaller vessel called a "hoop," which has at the bottom some parchment paper. The fluid preparation of the drug, having been made first in this inner vessel, that is sunk a short distance into the water in the outer vessel. After it has stood there a time, it is found that the crystalline and crystalloid principles contained in the drug will have left the inner vessel and gone into the outer, while the colloid principles will have remained in the inner vessel. When that process has gone on a sufficient length of time the contents of the inner vessel are discarded, and the contents of the outer vessel, after proper standardization, constitute the dialysate.

Dr. Lewis asked if dialyzed iron was prepared in the same way, to which the President replied in the negative. Dialyzed iron would not pass through the membrane. They label it dialyzed, perhaps for the same reason that they label the hypodermic tablets soluble. The method of preparation is scientific and calculated to give good results. The process is only applicable in cases where the active principles are crystalloids. It seems to be for a large line of drugs far in advance of the fluid extracts.

Dr. Castle remarked that it did not render the drugs liable to the change that may take place in the active principles due to thermal and chemical influences. In getting the active principles of the drug, it had been heretofore necessary to subject them to certain chemical processes in order to render certain parts soluble, or to form salts. There is no chemical change involved in this process. It is simply the property of certain substances to pass through an animal membrane, and of certain other substances not to pass through.

Some reference having been made to Keith's so-called resinoids, Dr. Piffard remarked that some of the drugs brought forward by him could proba-

bly be prepared to better advantage by the process of dialysis. Thus, for instance, the *hydrastin* of Keith is not a resinoid, scientifically speaking, but a mixture of various substances, including the alkaloids, hydrastia (white), berberina, and xanthopuccina (both yellow), which would pass through the dialyzer, and are probably the efficient principles contained in the plant hydrastis canadensis.

Dr. Castle, in conclusion, called the attention of the society to an apparatus he had made, which was intended to facilitate grinding, and to be used in preparing the material of Dr. Fuller's tablets, and also for making triturations.

The society then went into executive session.

IOWA STATE MEDICAL SOCIETY.

The thirtieth annual session of the Iowa State Medical Society was held at Des Moines, beginning January 25, 1882, at 10 A.M.

The officers present were: *President*, T. J. Caldwell, Adell; *First Vice President*, D. Scofield, Washington; *Secretary*, J. F. Kennedy, Des Moines; *Assistant Secretary*, L. C. Swift, Des Moines; *Treasurer*, G. R. Skinner, Cedar Rapids.

The attendance, even at the opening session, was unusually large.

At 2 P.M. The President delivered the annual address.

The people, he said, need more light upon sanitary matters, and too many are criminally apathetic concerning the knowledge they now have on such matters.

The President recommended for the improvement and interest of the sessions, in a literary and professional point of view, the adoption of the plan suggested by Bowditch in an address before the American Medical Association.

Dr. A. Reynolds, of Independence, Superintendent of the Insane Hospital, read a paper on the "Plea of Insanity." He said, among other things, that no theory relating to the insane is more erroneous than that they are utterly irresponsible. He believed there was no such thing as the so-called moral insanity, pure and simple, unattended by intellectual capacity. In referring to Guiteau, he said that, sane or insane, he is responsible in law, and that neither the cause of humanity, nor the higher law, nor justice nor mercy can be subserved by giving him the benefit of a doubt. This sentiment was heartily cheered by the members.

Dr. J. A. Blanchard read quite an interesting paper upon "Inversion of the Uterus." He gave a case occurring in his practice of six weeks' standing successfully reduced.

Following this, Dr. J. Williamson, of Ottumwa, read a paper entitled "Disappointments of Country Physicians in the Practice of Gynecology." The paper was listened to with interest, and a lively discussion was indulged in regarding some facts stated in this and the paper read by Dr. Blanchard.

Evening Session.

At the evening session, Dr. R. J. Farquharson, of Des Moines, read a paper on "A Small-Pox Hospital."

Second Day—Morning Session.

Dr. L. C. Swift, of Des Moines, read a paper on "Pyelitis Occurring during the Puerperal State."

Dr. B. McCluer, of Dubuque, presented a paper prepared by Dr. Wm. Watson, of Dubuque, on "The Diseases Incident to Military Prisons, and the Influences by which they are Modified." The paper gave the results of his observations while Post Surgeon at Rock Island, and in charge of the Confederate prisoners during the late war.

Dr. G. W. Beggs, of Iowa City, read a paper detailing his practice in the care of the newly-born infant. He emphasized most particularly the importance of wrapping the babe, as soon as it was taken from the mother, tightly in a soft blanket *without* washing, and letting it remain in that position for ten or twelve hours.

Second Day—Afternoon Session.

Society convened at 2 P.M.; President in the chair.

Dr. C. M. Habby, of Iowa City, read a paper on "Operative Procedures in Corneal Lesions." Dr. J. R. Gorrell, of Newton, also read a paper, entitled "Life: What is It?"

Dr. E. H. Hazen, of Davenport, followed with a paper on "Local Treatment of the Mucous Membranes," expressing most confidence and better results from local treatment by proper douches and dry, medicated inhalations, conjoined with constitutional remedies when indicated.

Second Day—Evening Session.

The evening was given to the lecture on "Microscopy." Dr. J. J. M. Angear, of Fort Madison, had on exhibition quite a number of microscopes, and gave an interesting address upon microscopy, and demonstrated the wonderful power and the hidden beauties of nature as revealed by the microscope.

Dr. McIntosh, of Chicago, who was present, rendered valuable assistance and furnished some striking and brilliant exhibitions of the power of the solar microscope.

Third Day—Morning Session.

Thomas Dunn English, M.D., LL.D., the poet, class of '39, University of Pennsylvania, was introduced and elected a member of the society by invitation.

Dr. McClure, of Mount Pleasant, and Dr. W. F. Peck, Davenport, presented papers in memory of the late Dr. John C. Hughes, and Dr. W. H. Ward, of Des Moines, one in memory of Dr. C. W. Davis, of Indianola.

Dr. C. M. Drumelar, of Panora, read a voluntary paper detailing a case of "Fracture of the Skull."

All the above-named papers were received by the society, and, after discussion, were referred to the Committee on Publication.

The following officers were elected for the ensuing year: *President*, D. Scofield, Washington; *First Vice-President*, S. E. Robinson, West Union; *Second Vice-President*, H. L. Getz, Marshal; *Secretary*, J. F. Kennedy, Des Moines *Assistant Secretary*, D. McCrea, Council Bluffs; *Treasurer*, G. R. Skinner, Cedar Rapids.

Council Bluffs was selected as the next place of meeting, and the time, third Wednesday in May, 1883.

This session was one of harmony and hard work, and the character of the papers read was above the average in ability and interest. The attendance was large, and nearly fifty new members were added to the list.

Correspondence.

CHLOROFORM AND THE NITRITE OF AMYL.

To the Editor of The Medical Record.

Sir: The importance of the subject, and a desire to correct two errors in a recent statement concerning the nitrite of amyl, must be my excuse for again asking a place in your columns. In the article on anæsthetics, by Joseph Lister, Esq., revised by J. C. Reeve, M.D., in Packard's "Holmes' System of Surgery," it is stated that: "Nitrite of amyl has received the highest commendation as a means of combating chloroform narcosis. Its *administration being by inhalation of the vapor*, it can only be resorted to in some cases. Recoveries have unquestionably followed its use, but whether as a sequence or consequence is not so clear, and further observations are needed. It must be remembered that, although nitrite of amyl is a most effective remedy in one form of cardiac disease, its brilliant service is not due to its action on the heart, but upon the peripheral arterioles, spasm of which it relaxes, and that its action in lowering the blood-pressure is *not favorable to its use in chloroform accidents*."

My experiment on a kitten,* made in 1876, showed that the hypodermic injection of five drops of nitrite of amyl, after complete anæsthesia and abolition of reflex action, with suspended respiration and a fluttering heart, was promptly followed by reaction of the pupils to light, resumption of respiration, and improved cardiac action, with ultimate recovery; so that the administration of this agent need not be *limited to inhalation of the vapor*, but it may be given hypodermically. Again, although "its brilliant service is not due to its action on the heart," the result is similar, since, by the *vis a fronte* effect produced when the arterioles are relaxed, the cardiac current is drawn into the enlarged vessels, and stasis is prevented. Further, the statement that "its action in lowering the blood-pressure is not favorable to its use in chloroform accidents" does not seem to be borne out by clinical experience. Dr. James L. Minor, of Rapidan, Va.,† reports a case in which a patient who had locomotor ataxia passed suddenly from a condition of usual health into collapse. There was general pallor, with complete unconsciousness, and the arterial beat was imperceptible at the radial pulse, but faintly recognized at the femoral pulse. Here was evidently a lowering of the blood-pressure similar to that which occurs in chloroform syncope. The ordinary method of inhaling a few drops of nitrite of amyl was tried in vain, and then three minims were injected hypodermically. In a few moments the heart responded, and the pulse was recognized in the radial artery. In about half an hour the effects of the medicine seemed to disappear, when five minims were injected, with the result of producing more vigorous action than before. The patient lasted for nearly twenty-four hours, during which time amyl nitrite was frequently administered. As much as fifteen minims were given at one of the doses when the "*pulse became incompressible*." "So long as the vital powers were able to respond, the administration of the medicine was followed by reaction which seemed marvellous." I have a record of nine cases, in *all* of which impending death from chloroform seems to have been averted by the nitrite of amyl. In some of them the evidence is absolutely conclusive in its favor. It would be unfortunate if a full trial of it should be prevented by incomplete information as to the methods of employing it, or hypothetical objections as to its mode of action.

Respectfully,

F. A. Burrall, M.D.

48 West Seventeenth Street.

* New York Medical Journal, November, 1876.

† Braithwaite, lxxviii., p. 231.

THE QUESTION OF TASTING MEDICINES INTRODUCED INTO THE VAGINA AND THE EAR.

To the Editor of The Medical Record.

Dear Sir: In reporting the discussion of Dr. Foster's paper at the December meeting of the Materia Medica Society, the Record of February 25th states that "Dr. Sexton related a case in which, on iodoform application, a peculiar sensation passed from the right ovarian region to the ear, an indefinite taste, not of iodoform, being experienced at the same time."

If my memory serves me, what I did say on that occasion was this, alluding to a case under the treatment of a physician for a diseased condition in which the right ovary had been the seat of much pain for over a year, that whenever the ovarian pains were experienced by the patient, severe pains were at the same time felt in the right ear, and that the otalgia thus set up in the ear was associated with other nervous phenomena, one of which was the sensation of something crawling along the neck on the affected side, and on the back of the shoulder. There was during the attacks a sensation, slightly painful, which seemed to be propagated from the ovarian region in the direction of the ear. The otalgia, moreover, was only present when the disturbance in the ovarian region suffered an exacerbation. I found on examination that the right ear was entirely free of any inflammation whatever; that there was no local cause that could give rise to the pains.

This case was pointed out as illustrative of the intimate nervous relationship existing between regions remote from each other, as the ovary and the ear. I also stated that I had frequently seen instances where patients experienced excitation of the sense of taste on application of remedies to the ear; that even the introduction of a silver probe into the external auditory canal was often sufficient to give rise to the same phenomenon.

From observations of this kind it seems that we are warranted in believing that the taste in the mouth in the cases cited by Dr. Foster could be explained by nervous transmission rather than by the absorption of the iodoform and its passage to the mouth through the circulation. And inasmuch as the odor of the drug usually pervades the air when used, the patient cannot, of course, always differentiate as between the action on the senses of olfaction and taste.

Believe me, yours sincerely,

Samuel Sexton.

Removal of the Uterus.—The patient from whom Sir William McCormac recently removed the entire uterus, on account of cancer, is said to be convalescent.

IODOFORM IN SUPPURATION OF THE MIDDLE EAR.

To the Editor of The Medical Record.

Dear Sir: In the report of the proceedings of the Materia Medica Society contained in the Record of February 25th, the opinions of some of the members as to the action of iodoform in suppuration of the middle ear are so at variance with what I have myself observed, that I feel prompted to state briefly my own experience with this drug.

In some cases of chronic suppuration of the middle ear I have found iodoform to be one of the most useful remedies. In the greater proportion of these cases I am unable to state any exact indications for its use, but can merely say that it acts very beneficially where all other applications seem to be inefficient or harmful. For instance, I have now before me the record of a gentleman, aged sixty-six, who has had a perforation of the left drumhead and an intermittent discharge from the middle ear since childhood. When first seen by me the discharge had lasted for six weeks. He was treated with a variety of remedies for several months with no apparent benefit. The suppuration then ceased at once after an application of iodoform. The discharge has recurred several times since and has been always so promptly checked by the same remedy—usually by a single application—that I think the remedy may fairly have the credit of the cure.

A class of chronic cases in which I have used iodoform with great satisfaction are those characterized by considerable sensitiveness of the parts, unhealthy-looking granulations, and a tenacious whitish secretion which tends to adhere to the underlying surface in the form of a tough membrane.

Iodoform acts well also in some cases of acute suppuration, and I think it will occasionally be found preferable to caustics for some forms of granulations.

On the other hand, I have known it to do positive harm. In one case the suppurating surface was almost completely closed by cicatrical tissue, and there was simply a moderate thin discharge, coming apparently from the upper part of the tympanum. A very small quantity of iodoform was applied, and the next day there was extensive destruction of the new tissue, a thick purulent discharge, vertigo, staggering, nausea, and general prostration, lasting three or four days.

My method of using iodoform in the ear is to have it very finely powered and to apply it (with Andrews' powder blower) in the form of a rather thin film. I do not know that there is any special advantage in applying it in such excess as is often used. When used in the latter way it sometimes causes temporary throbbing and tinnitus, and it sometimes forms crusts with the discharge, which may prove irritating. I have not found its odor any hindrance whatever.

I think iodoform is very useful also in some cases of trachoma and the attendant corneal disease. I prefer to mix it with vaseline, spread it thickly on the inner surface of the lid, and by means of the lid to rub it well over the cornea for a few seconds.

In a recent number of The Medical Record will be found an article by Dr. F. H. Rankin on this same subject.

Edward T. Ely.

The Commencement of the University of Pennsylvania Medical Department took place March 15th. There were 122 graduates in medicine, and 11 in dentistry. Professor James Tyson delivered the valedictory address.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 11, 1882, *to March* 18, 1882.

Brown, H. E., Major and Surgeon. Having reported at these Headquarters, will proceed to Jackson Barracks, La,, and report to the Commanding Officer for duty. S. O. 32. Department of the South. March 14, 1882.

Porter, Joseph Y., Major and Surgeon. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 32, C. S. Department of the South.

The following named officers of the Medical Department will report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and on its conclusion, return to their stations:

Captain Wm. H. King, Assistant-Surgeon, Fort McHenry, Md.

Captain H. S. Turrill, Assistant-Surgeon, Madison Barracks, N. Y.

Captain W. Reed, Assistant-Surgeon, Washington Barracks, D.C.

Captain H. S. Kilbourne, Assistant-Surgeon, Fort Porter, N. Y.

Captain M. W. Wood, Assistant-Surgeon, Fort Brady, Mich.

Captain R. W. Shufeldt, Assistant-Surgeon, Washington, D.C.

Captain H. O. Perley, Assistant-Surgeon, Fort Columbus, N. Y. H.

Captain H. G. Burton, Assistant-Surgeon, Fort Hamilton, N. Y. H.

Captain L. M. Maus, Assistant-Surgeon, at expiration of his present leave of absence, and then to return to his proper station, David's Island, N. Y.

Captains Wm. H. Corbusier and Wm. B. Davis, Assistant-Surgeons, at the expiration of their present leave of absence, and upon conclusion of their examination, to report by letter to the Surgeon-General. S. O. 58. A. G. O., March 13, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 18, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 11, 1882.	7	5	204	3	191	108	36	0
March 18, 1882	8	9	242	2	166	110	26	0

Commencement at Bellevue Hospital Medical College occurred March 16th at Chickering Hall. A class of 163 was graduated. The diplomas were conferred upon the class by Professor Isaac E. Taylor, M.D., President of the Faculty. Dr. J. S. Billings made the address to the graduates.

James W. McKean, M.D., of Iowa, delivered the valedictory address.

Original Communications.

OBLIQUITY OF THE PELVIS AND ITS TREATMENT; OR, SACRO-LUMBAR CURVATURE.*

By CHAS. F. STILLMAN, M.D.,
NEW YORK.

THE subject of obliquity of the pelvis, or, as I prefer to call it, sacro-lumbar curvature, has not received from surgeons the attention that its frequency and importance demands. Very little has been written upon it, and these disconnected paragraphs have usually appeared under the descriptions of diseases to which the curvature is sometimes secondary.

It is in reality a curvature of the spine, and I claim that it can be as distinctly classified and described as such with as much reason as can lateral rotary curvature. The appended division of lateral curvature into (1) lateral rotary, (2) sacro-lumbar is, therefore, proposed for consideration; and while I am not in favor of increasing the number of names which encumber our surgical nomenclature, obliquity of the pelvis is so distinctively spinal curvature that it should be given a name expressing its position.

It may, perhaps, be said that it is improper to include a sacro-lumbar twist among the curvatures of the spine, that it really should be classified among abnormal conditions of the lower extremity.

To this the answer would be returned that the spine is supposed to extend to the tip of the coccyx and therefore includes the sacrum, and that the sacrum is united to the remainder of the pelvis in such a manner as to make it practically one piece, and that a twist of the pelvis upon the last lumbar vertebræ is anatomically analogous to the twisting of the last lumbar vertebræ upon the fourth, or the fourth upon the third.

If only the muscles governing the movements of the thigh upon the pelvis were involved, we might then refuse to call this deformity a spinal curvature, but besides these, the muscles connecting the thigh with the spine, notably the psoas muscles and those connecting the pelvis with the spine and lower rib, are required to produce the curvature.

Lateral rotary curvature is caused mainly by the action of the latissimus dorsi, which has its insertion in the humerus, just as the psoas in sacro-lumbar curvature has its insertion in the femur.

The two curvatures are analogous, but while they may coexist in the same person, there is one symptom of sacro-lumbar curvature which serves to distinguish it, and that is limping; for while lateral rotary curvature may exist without this feature, sacro-lumbar curvature cannot; and while lateral rotary curvature destroys the parallelism of the transverse plane of the chest with the transverse plane of the pelvis, sacro-lumbar curvature destroys the parallelism of the transverse plane of the pelvis with the transverse plane of the chest.

They are both, however, included in the general term of lateral curvature of the spine.

Some may think it strange that as coequal varieties of lateral curvature, the curvatures, cervical, dorsal, and lumbar—as they are usually called, because of the location of the greatest curve, as it may happen to be—are not included.

This is not done because they are varieties of lateral rotary curvature, the same muscles being involved whether the main curve be cervical, dorsal, or lumbar; this not being the case with sacro-lumbar curvature, in which the pelvis becomes tilted and twisted by an entirely different set of muscles.

The erect position of the body depends upon the tone of its muscles. These are divided into two sets which act against each other and serve to keep the body in equilibrium, ready to move either reflexly or voluntarily upon the slightest provocation. This balance is lost during sleep and periods of unconsciousness, for then the body is limp, and if unsupported, tends to fall. We are unconscious of effort in producing this balance, but the merest injury to one of the inferior extremities serves to throw our weight upon the sound limb and produce distortion.

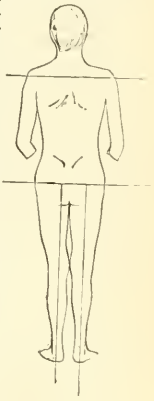


FIG. 1.

When erect, the transverse axes of the shoulders and pelvis should be parallel and also the axes of the limbs, the latter being at right angles to the former, see Fig. 1.

If the weight be sustained on one limb, the latter angles become acute or obtuse instead of right angles.

For purposes of rest nature has allowed man to assume a position which tends to the production of lateral curvature. If the weight of the body is received upon one foot, see Figs. 2 and 3, the opposite side of the pelvis is higher and a sweeping curve is noticed from the head to the coccyx, the opposite shoulder being the higher. The transverse axis of the pelvis thus forms an obtuse angle with the vertical axis of the leg, and the transverse axes of both pelvis and shoulders are deflected from the horizontal and from their parallelism with each other. We have in this condition of rest, sacro-lumbar curva-

FIG. 2.

FIG. 3.

* Read before the Medical Society of the County of New York, March 27, 1882.

ture and lateral rotary combined. But when this position is changed for the erect one, the parallelism of the shoulders and pelvis is reassumed and the axes of the legs become at right angles to the axes of the pelvis. That sacro-lumbar curvature is included in the lateral curvature or this position of rest, may be proved by assuming that position of rest and taking a step or a succession of steps with the limb fixed on the pelvis at the obtuse angle assumed. If the limb be carried in this fixed position, the steps cannot be taken *without decided limping*, and if the body be balanced upon the opposite limb the fixation being still continued, the foot of the fixed side will be raised from the floor.

Frequent and prolonged standing in this position is a fruitful cause of the lateral rotary curvature which is so often observed about the age of puberty, and would be a source of sacro-lumbar curvature as well, were it not that the limbs support the pelvis upon two very movable ball-and-socket joints, and that the tendency to parallelism between the limbs prevents the curvature occurring involuntarily. Then, too, the reception of the weight of the body upon the sacrum, midway between the movable supports, tends to equalize the angles and prevent the curvature. When standing in the position of rest, the foot being the *fixed* point, the psoas and iliacus muscles curve the lumbar portion of the spine and tilt the pelvis forward, and from the obliquity of their insertion into the inner and back part of the thigh that side of the pelvis is drawn backward behind the proper plane, the pelvis thus being twisted on the last lumbar vertebra, this upon the fourth, the fourth upon the third, the third on the second, the second on the first, and finally the first on the last dorsal, these corresponding to the points of origin of the psoas muscles. In addition, a contraction of the quadratus lumborum of the same side is present. It must be borne in mind, in order to explain this association of muscular force fully, that the nerve-supply of the quadratus lumborum and the psoas muscles is derived from the same source, the anterior branches of the lumbar nerves, and that the iliacus is supplied by the anterior crural, and that when one of these muscles is found to be contractured or inefficient, the others are usually associated with it. I, for convenience, therefore, shall refer to them as the psoas group. Instead of standing in the position of rest, if the patient lie upon the back and the thorax be taken as the *fixed* point, the psoas group flex the thigh upon the pelvis and rotate the femur outward.

It will readily be seen, therefore, that if these muscles become contractured and thereby shortened, the distance between their origin and insertion will be decreased, the lumbar vertebræ will curve forward and be deflected toward the opposite side, when the erect position is assumed, and the corresponding side of the pelvis will be twisted and seem apparently higher, producing the diagnostic distortion of sacro-lumbar curvature; and conversely, if the patient assume the horizontal position, the knees being flexed, the sacro-lumbar curve disappears, only to reappear if the knee be brought down to the horizontal plane.

It will be seen, therefore, that a certain degree of flexion of the thigh on the pelvis is produced by the contraction of these muscles, and that this flexion cannot be reduced by voluntary effort upon the part of the patient. How, then, shall we reduce this curvature? *First overcome the flexion and abduction or adduction and then parallelize the shoulders and pelvis.* To do this requires antagonism of the entire psoas group. Let us see, first, whether the *weight of the limb* would be itself sufficient to affect this antagonism.

If, by suspension, the shoulders and pelvis parallelize and the heels are on the same plane, we can consider the group antagonized by the weight of the limb alone, and we can keep this antagonism constant by means of a brace for that purpose, which is now exhibited to you. It consists, as you see, of two well-fitting segments, one for the pelvis and the other for the thorax, connected posteriorly by an extension-rod, provided with joints for lateral and rotary motion.

Appropriate shoulder- and hip-straps are used to fix the segments immovable upon the pelvis and thorax, and elastic cords are provided to connect the segments on the side opposite the contracture.

This brace, as you see, allows all necessary motion of the back, secures all possible stretching apart of the segments, thus imprisoning symmetrical extension to the same extent as does the plaster jacket, and yet allows any degree of elastic power to be applied necessary to parallelize the pelvis and shoulders. It is light, comfortable, and above all, effective for the purposes intended.

If the contraction of the psoas group be so marked that the resulting curvature cannot be reduced by the weight of the limb, a stretching appliance should be used, by which a considerable degree of forcible reduction may be secured. It should be attached above to the trunk and below to the thigh, and is provided with a double motion at the hip, so that abduction, adduction, flexion, and extension may all be allowed and secured at any angle. Its superior attachment should rest firmly against the back as high as the eleventh dorsal vertebra, so as to cover the origin of the psoas muscle. This should be made very firm, to keep the pelvis and spine from rotating upon each other, to hold them as one piece, so that when the limb is powerfully extended on the trunk, the lumbar vertebræ will not curve. The inferior attachment is simply a firm band which encircles the thigh just below the hip-joint, in the zone of insertion of the psoas and iliacus. It will readily be seen, if the instrument be properly applied, while the patient be in sitting posture (for then the lumbar curve disappears) and the patient then reclines, any attempt to force the limb down to its proper

Fig. 4.

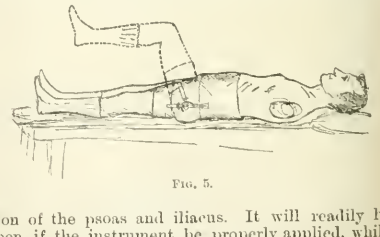


Fig. 5.

position must stretch the psoas group, which extension can be secured by the instrument, see Figs. 4 and 5.

The amount of the flexion which is reduced on the first trial depends upon the duration and nature of the case. The instrument should then be clamped to secure the stretching already accomplished and avoid the recontraction which would otherwise ensue. And on the next occasion, if one be necessary, the process is begun where the surgeon ceased at the previous operation, and more reduction of the contraction is obtained and secured in the same manner, and the process is repeated until the contraction of the psoas group is overcome. The brace for parallelizing the pelvis is then worn until the muscular power of the two sides of the body becomes equalized, and the cure becomes complete.

Instead of using a stretching appliance, tenotomy of the psoas and iliacus may be resorted to, but the cases in which it might be necessary, may be comprised under the following heads:

First.—When the curvature is of long standing and accompanied by absorptive changes in the articular surface of the vertebræ. The muscles of the contractured side exceed those of the relaxed side in power, and the latter, from the prolonged stretching they have undergone, have lost contractile power to some degree. Here tenotomy might be followed by an equalization of power and consequent symmetry, not to be obtained by any other method, particularly if it be followed by symmetrical extension of the lumbar vertebræ.

Second.—When the curvature is of long standing and bilateral. Tenotomy of the psoas and iliacus muscles—although, so far as I am aware, it has never been practised—would probably be followed by a symmetrical reduction of the double curvature, and these conditions would probably be benefited by the operation, but in other parts of the body, tenotomies are often followed by a lapsing into the original state for which the operation was performed, and the reason for this is physiological.

If the tendon of a muscle be divided, the contractility of that muscle causes it to retract and a consequent atrophy takes place, and when the tendon, permanently lengthened as it becomes by the new structure which unites the separated extremities, again performs its functions, there is less muscular structure than before to govern it, and unless the operation has permanently equalized the strength of the antagonistic muscles, distortion will ensue.

In all cases, tenotomy permanently weakens the muscle, and is therefore to be used only when it is deemed necessary to weaken a muscle instead of strengthening it. In most cases, we prefer to strengthen the weakened muscle and make it equal in power to the stronger one, instead of diminishing the stronger by tenotomy to make it equal in power to the weaker; or, in other words, we prefer, wherever practicable, to stretch the stronger muscle, and thus relax the weaker, which is appropriately treated and assisted until it equals its fellow in strength, when, of course, distortion becomes impossible. I take the ground, therefore, that mechanical means should all be exhausted before tenotomy is resorted to.

Sacro-lumbar curvature is found with any abnormal condition accompanied by an inequality of length in the lower limbs, and in general with any condition in which the movements of locomotion are not performed with the same action on both sides. It does not appear to be a primary curvature, except in the sense that club-foot is a primary disorder, although consequent upon muscular inefficiency, or in the sense that lateral rotary curvature is primary, although consequent upon inefficiency of certain muscles of the trunk. It is essentially secondary, and I am not aware of a single recorded instance of this deformity in which it has occurred without association with some process to which it was either secondary or compensatory.

There is a *paralytic* form of this curvature which is found when the muscles of one lower limb become partially or wholly paralyzed.

If the psoas group of the deficient side is also affected, the curvature is produced on the opposite side, causing apparent lengthening.

If the psoas group of the deficient side is not affected, the curvature is produced on the same side, causing apparent shortening.

The latter might easily be mistaken for hip disease but may be differentiated by its history, the absence of pain, and in its early stages by suspension, which produces a parallelism between the shoulders and pelvis, and equalization of length in the limbs, which are not necessarily either inverted or everted except at will.

The so-called infantile paralysis is especially productive of this form of curvature, and it usually involves the psoas group of the same side, so that apparent lengthening is present, the limb being dragged behind its fellow. The cases are rare in which the curvature occurs on the same side, but I wish to present such a one to your notice to-night. Previous to January, 1876, he was a healthy boy without lameness, but at that time, when nine years old, he was taken sick with diphtheria of a very severe form, a sister dying of the same disease at the time, and when convalescence commenced it was found that his left limb was wasted and diminished in power. Each joint, however, was normally mobile, and as he began to go about, the psoas group of the affected side contracted and produced an apparent shortening, for which he was advised to wear a high-heeled shoe, which simply served to increase the deformity, so that when he first came under observation in August, 1880, four and a half years after the commencement, he was deformed to the extent shown in Fig. 6.

Fig. 6.

The movements of all the joints were normal and the affected thigh measured three and a half inches less in circumference than its fellow, the leg two inches less, and there was an apparent shortening of two inches in the limb itself as compared with the other. Suspension in this case, even after four and a half years of existence, produced a parallelization of the planes of the pelvis and shoulders and a parallelization and right angulation of the limbs also, the feet being on the same plane, so that by using a brace which secured the stretch produced by the suspension, and yet allowing motion and elastic tension on the side opposite the deformity, the result shown in Fig. 7 was produced.

It is but rarely in these paralytic cases that the deficient nerve-tone can be restored, and it has been only partially so in this case, the thigh at the present time being somewhat less in circumference than the other, and the leg also somewhat less, and as the patient is suspended you will see that there is now an actual shortening of about one-fourth inch, the result of the deficient nutrition of the limb compared with its fellow during the six years that the trouble had existed, and which has occurred during his years of growth.

Fig. 7.

The difference between an actual shortening of one-fourth inch, and an apparent shortening of two inches, which formerly existed, and which would return were so high-heeled a shoe again employed, suggests the use of suspension in all cases of apparent or real shortening of a limb, to see just how much actual shortening exists and to indicate the amount of thickening the sole should receive, for if it receive more than the exact difference in length between the limbs, it serves to produce and constantly increase a sacro-lumbar curvature of that side.

It is now, to a great extent, the custom to order high-heeled shoes for all forms of real and apparent shortening of limbs.

The majority of such cases add a little thickness each year to the shoes until they walk on several inches of sole more than is proper, this being rendered necessary by the increase in the sacro-lumbar curvature. This curvature should be reduced first, by which all apparent shortening is relieved and then, if actual shortening is found to exist, an accurate measurement should be made of this, and the sole and heel of the shoe increased correspondingly; but if only an apparent shortening existed, the high shoe would be worse than useless, and its use should be avoided unless fixation of one of the joints is present. The treatment of the paralytic form of sacro-lumbar curvature is then directed to parallelizing the pelvis and shoulders and restoring the right angles of the limbs, the treatment of the paralysis itself coming more properly in the sphere of the electrician.

By appropriately treating the curvature we reduce the limping to a minimum, but limping will not be entirely relieved until the two limbs correspond in muscular power.

Sacro-lumbar curvature is also often met with as a temporary condition, assumed to prevent the weight of the body from being borne upon an injured limb. The psoas group of the opposite side contracts, and an apparent lengthening of the affected limb produced, which allows the weight to be borne mainly on the sound limb.

This form of curvature, which for convenience we will designate as the *spasmodic* form of sacro-lumbar curvature, is temporary, and may be either voluntary or involuntary. It attends any attempts at locomotion, during which the affected limb is prevented from bearing its share of the weight of the body. Its treatment is, of course, dependent upon the condition which accompanies it, and treatment directed to that condition relieves the curvature.

To render certain the diagnosis of this variety, it is only necessary to suspend the patient, when it will be found that the normal axes and angles of the limbs and trunk are restored.

Sacro-lumbar curvature is also found associated with ankylosis of the joints of the lower extremity, and also as an accompaniment of club-foot if the inequality of power in the two legs be marked, and with other morbid conditions.

When occurring with ankylosis of the knee, if the joint be fixed at such an angle as to make it shorter than its fellow in a direct line from heel to hip, so that the foot in taking a step causes the body to dip to that side, the contraction of the psoas group takes place on the opposite side; and if the knee be fixed in a straight position, so that the leg is longer than its fellow during the stepping process, the contraction takes place on the same side. The curvature in this case is purely compensatory, and if not of too long standing, is relieved by restoring the normal mobility of the joints, and the same rules of treatment apply equally well to ankylosis of the ankle and joints of the feet. When occurring with fixation of the hip-joint, sacro-lumbar curvature is essentially secondary, and is of sufficient importance to merit a careful description.

Sacro-lumbar curvature, due to fixation of hip-joint.—The kind and degree of this curvature depends upon the angle at which the thigh is fixed on the pelvis, these angles being described at length

Fig. 8.

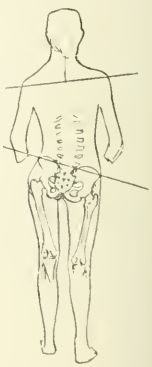


Fig. 9.

by Barwell in his last work upon joints, under the designation of hip disease. If the femur is united to the pelvis at an acute angle, we have a contraction of the psoas group of the affected side. See Figs. 8, 9.

If the femur is united to the pelvis at an obtuse angle, we have a contraction of the psoas group of the opposite side. See Figs. 2 and 10.

If the sacro-lumbar curvature be associated with a fixation of the hip-joint, we must first overcome this fixation before the curvature can be reduced.

We have already noted the parallelism between the axes of the pelvis and shoulders, and between the axes of the limbs, and so long as the weight of the body is borne by the limbs, the latter tend to produce this parallelism between themselves without regard to the angles they make with the axis of the pelvis.

If the curvature be primary to changes in the angles of the limbs, its reduction is followed by changing of the femoro-pelvic angles from obtuse or acute to right angles, and anteriorly from a state of flexion, the limb is placed in line with the vertical axis of the trunk. See Fig. 1.

The obtuse angle, as we have seen, is associated with apparent lengthening, and the acute with apparent shortening, while flexion exists with both. But if the thigh be fixed either spasmodically or by ankylosis upon the pelvis, this must first be relieved, or parallelization of the pelvis would be followed by greater distortion.

Fixation of the hip with flexion and abduction (see Fig. 10), is most often found in the acute stage of hip disease, when the capsule of the joint is distended, the affected limb being fixed at an obtuse angle with the pelvis. Now, when the patient stands the other limb parallelizes itself without altering the angle its fellow has assumed with the pelvis, and

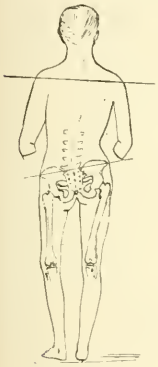


FIG. 10.

FIG. 11.

the psoas group of the opposite side contract to assist the parallelizing, and thus produce a sacro-lumbar curvature of the side opposite to the affected joint, so that we have the phenomena of the affected hip fixed by the muscles immediately about it, with prolonged stretching of the psoas group of the same side in response to the extra contraction which the psoas group of the opposite side has made in order to keep the pelvis and sound limb at an acute angle, and, as a consequence, apparent lengthening of the affected side.

It will thus be seen that fixation of the hip-joint does not necessarily involve contraction of the psoas group of the same side, and this feature must be borne in mind, that the group of muscles producing sacro-lumbar curvature is not to be considered as the group which serves to fix the hip-joint immovably.

If we were to attempt to reduce this curvature without first reducing the fixation at the hip, the position of the affected limb, if the shoulders and hips were parallelized, and the sound limb placed at right angles, would be thrown out as shown in Fig. 11.

The rule then should be observed when spasmodic or ankyloid fixation of the joint exists, not to attempt the reduction of the curvature until the natural relations of the joint to the pelvis are restored. After this is accomplished, the curvature itself should be treated as previously indicated. The case I take pleasure in presenting to you is an instance of fixation of the joint at an obtuse angle as a result of gonorrheal rheumatism. You will notice that suspension is followed by greater distortion, and that very little, if any, motion exists in the hip-joint itself. You will also notice that the contraction of the muscles about the affected side is associated with contraction of the psoas group of the opposite side. You will also notice that when he assumes the supine position, any forcible reduction is attended with great pain and resistance on the part of the patient. The treatment indicated in this case, is to reduce the fixation by brisme force, or some of the operations practised upon the joint, and then by an appropriate splint, such as has already been shown to you, to prevent recontraction, and allow passive motion when necessary, so that refixation does not take place. The hip is very firmly fixed, as you will see, and the muscles about it, notably the tensor vaginæ femoris and the adductors, are tense and contracted, and serve to fix the limb in a flexed as well as abducted position.

Suspension of this patient, and parallelization of the shoulders and pelvis throws the limb out at an angle of much distortion, and we must restore the mobility of the joint before the sacro-lumbar curvature of the opposite side can be relieved. With the co-operation of Dr. George F. Shrady, this patient was operated upon by brisement forcé, Dr. James F. Green and myself assisting. He was under ether about one and one-half hour, but the ankylosis was so firm, even after he had been kept recumbent and poulticed over the hip for three weeks previous, that only a limited range of movement was produced, and this only by almost dangerous application of force, but no bad symptoms followed.

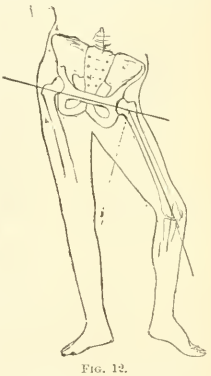


FIG. 12.

A diagram made from a sketch taken before the operation (see Fig. 12) and a glance at the subject who is before you shows that the position of the limb is improved, and at the next attempt we hope to complete the operation. This case presents a good instance in favor of my assertion that the sacro-lumbar curvature cannot be reduced without previously overcoming the ankylosis, and is also a striking instance of the fact that fixation of the hip at an obtuse angle with flexion produces apparent lengthening of the limb.

Fixation of the hip with flexion and adduction, see Fig. 6, is most often found as the result of the acute stage of hip disease. When this condition presents itself, the axis of the femur forms an acute angle with the transverse axis of the pelvis, and when the patient stands and the limbs parallelize, a contraction of the psoas group of the affected side is forced to take place thereby, and produces sacro-lumbar curvature with apparent shortening of the limb.

In hip disease, when the effusion in the joint having subsided or escaped, and the fixation of the hip

at the obtuse angle has disappeared, and the muscles which fixed the hip-joint have relaxed, the psoas group of that size is suffered again to contract. But if the case has been of long standing, so that the limb has become atrophied, or if tenderness exists about the joint to prevent the weight of the body being well borne, the psoas group contracts more than on the sound side, and we have apparent shortening.

The thigh rotates inward, and as the parallelism of the limbs must be maintained, the apparent shortening becomes permanent.

Parallelization of the pelvis and shoulders and placing the sound limb at right angles to the latter would only serve to create the distortion shown in Fig. 13, so that this must be reduced before the curvature can be overcome. This is the characteristic deformity of the third stage of hip disease and is present in many of the so-called cured cases, and the reason for this seems to be that the extension splints in use are not directed to the relief of the curvature. We must look upon the hip disease as not alone, but associated with an obliquity of the pelvis which is as important to be treated when found as is the disease itself, in order to effect a perfect cure, and the hip-splints in use do not fulfil the indications for the treatment of this deformity, because they do not combat the contraction of the psoas group.

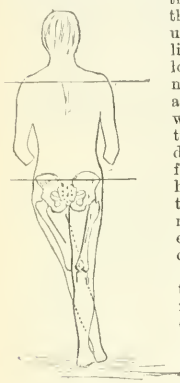


Fig. 13.

In fact, sacro-lumbar curvature does not seem to be affected by splints constructed on the Davis principle or its modifications, except so far as it may depend upon an abnormal condition of the hip-joint. If this be not of too long standing, the cure of the hip-joint disease is followed by a spontaneous cure of the curvature, but such splints have no effect upon the curvature *primarily*. Their power is exerted on the muscles governing the hip-joint itself, and we have already noted as a phenomenon that the psoas group of the opposite side is affected during the stage of lengthening in hip-joint disease, so that a splint directed alone against the contraction of the hip muscles does not fulfil the indications. To treat this form of sacro-lumbar curvature, we are required to reduce to mobility the fixation of the hip, either by brisme force or by prolonged stretching, and then to parallelize the pelvis and shoulders by the use of the brace already described.

Asymmetry, which is much more common, according to the statistics, than usually supposed, is attended by sacro-lumbar curvature, unless a high shoe be worn which corresponds to the actual difference in length between the limbs.

In conclusion, the limits of such a paper do not allow me to dwell at sufficient length upon many important points connected with this subject. It was also my intention when this paper was projected, to take up the study of lateral rotary curvature as well, and I had obtained the views of many of our leading surgeons with a view to incorporate them under that head, but for want of space I have been obliged to defer the consideration of that subject until some future time. For sacro-lumbar curvature, however, I claim a more important place than has hitherto been accorded to it, for upon the treatment of this curvature, and the conditions associated with it, depends the relief of that annoying symptom, limping, of which so much exists and for which so little is done, and in the further study of this condition, gentlemen of the society, I hope for your co-operation.

CARE OF THE TRACHEA AFTER ITS INCISION FOR THE RELIEF OF CROUP.*

By LEWIS S. PILCHER, M.D.,

BROOKLYN, N. Y.

During the last six years I have had occasion to incise the trachea for the relief of croup in thirty-three instances, in thirteen of which recovery was secured as the result of the operation. The following case, the third of the series, of date March 3, 1876, exemplifies some of the more important of the conditions of the trachea that demand consideration in connection with an operation for tracheal incision. The patient, Stanley Herbert Smith, a robust boy of two and a half years, was attacked with croup on the 2d of March, 1876. I first saw him twenty-four hours after the beginning of the attack, when he was already insensible, cyanosed, having extreme dyspnœa, and evidently *in articulo mortis*. Assisted by Dr. F. W. Rockwell, I proceeded at once to incise the trachea. Distended veins in the track of the incision gave rise to such free hemorrhage that the incision through the cricoid and first ring of the trachea had to be made through a pool of blood. Apparent death had supervened before the completion of the operation. The canula—Fuller's pattern—was hastily introduced, and efforts at artificial respiration instituted. Hypodermics of brandy were also administered. Resuscitation was accomplished, and within half an hour perfect reaction was secured. By the third day, the surfaces of the incision and the adjacent skin were covered by a diphtheritic deposit.

On the fifth day there was copious expectoration of membranous shreds.

On the seventh day trouble began to be experienced from the entrance into the larynx of food when swallowed.

By the fourteenth day all the diphtheritic deposits had been thrown off, exposing sloughing surfaces. Nearly all food taken by the mouth now seemed to enter the larynx. At the close of the eighteenth day after the operation, he died by asthenia, having been free from any symptoms of pulmonary complication throughout. The sloughing about the incision was found to have destroyed the anterior half of the thyroid cartilage, one lateral half of the cricoid, and the anterior portion of the three upper tracheal rings. In addition, upon the anterior wall of the trachea, about half way down to its bifurcation, was an ulcer which had destroyed portions of four tracheal rings. The tracheal mucous membrane was roughened by scattered remnants of diphtheritic deposit still adherent; the bronchial mucous membrane, as far as the third bifurcation, was congested, but beyond that point was healthy in appearance.

This case presents, strongly drawn, three of the most serious conditions of the trachea which may

* Read before the New York Surgical Society, January 24, 1882.

be present after its section for relief of laryngeal stenosis, viz.: deposit of diphtheritic exudation upon its mucous surface, limited ulceration of a portion of its wall from pressure, and sloughing from becoming involved in diphtheritic gangrene of the wound of operation.

From the record of the post-mortem appearances in the case, it will be seen that the intratracheal exudate, though fragments of it were still clinging to portions of the wall of the tube at the end of eighteen days, had never extended beyond the larger ramifications ot the bronchi, to which limitation is due the complete absence of obstructive symptoms after the tracheal section had been made.

A similar limitation of the exudate was well exemplified in my eighth case, that of a boy, Thomas Smith, aged five years, upon whom I operated May 27, 1877. The incision into the trachea revealed its interior carpeted with a dense, closely adherent membranous exudate, of which two large shreds were separated and removed at the time. The wound surfaces and the adjacent skin became covered by a diphtheritic exudate by the third day, attended with considerable phlegmonous inflammation of the deeper tissues, and an extended erysipelatous areola upon the skin of the neck and chest. Trouble from the entrance of the food, in the act of swallowing, into the air-duct began to be experienced on the fifth day, but on the day following it became possible to permanently remove the canula, and finally a complete recovery was accomplished. Again, in my tenth case, that of Thomas Flanagan, aged seventeen months, who died from œdema of the lungs at the end of thirty-two hours after operation, I was able to determine by autopsy the existence of a thin membranous pellicle extending from the tip of the epiglottis to the bifurcation of the trachea only, investing the surface throughout.

In eleven additional cases, of those in which the presence of a membraniform exudate in the trachea was determined when it was opened, no extension of the exudate took place; of these, three died from diphtheritic toxæmia, at periods of 14, 22, and 49 hours respectively after the opening of the trachea; two died from accidents incident to the separation and discharge of the tracheal exudate; one died on the fifth day from capillary bronchitis, and five made good recoveries. The circumstances attending the death of the two which I have reported as having been occasioned by accidents incident to the separation and discharge of the tracheal exudate were painfully instructive. In the first case, the sixteenth of my series, of date January 4, 1879, a robust boy, aged nearly five, the trachea had been incised below the isthmus; some membranous shreds were expelled at the time of the excision. For forty-eight hours the case progressed favorably, with the expectoration of much membranous débris and muco-pus; at the end of this time sudden and marked dyspnœa developed, not relieved by cleansing the canula. After ten hours of ineffectual struggle, during which I was not notified of his condition, death by asphyxia occurred. When I reached the child, after its death, I found, upon removal of the canula, a tenacious mass of membranous débris and mucus in the trachea, surrounding and occluding the lower end of the canula, which the unaided efforts of the patient had been unable to expel, but which could have been easily dislodged by proper assistance.

In the second case, the twenty-first of my series, a girl aged seven, at the moment of the section of the trachea a tubular cast of its interior, an inch in length, was expelled. For three days she did well, with moderate expectoration, containing at times membranous shreds. At 10 o'clock of the evening of the third day I saw her, when she had a pulse of 126, and an unembarrassed respiration of 21 per minute. Shortly after I left her, as I afterward learned, dyspnœa developed, and remained unrelieved and intense until midnight, when death took place. No post-mortem was made. I can explain the symptoms only on the hypothesis of the detachment of a flake of the exudate, too large to be expelled through the canula without assistance, and by which the lumen of the trachea was blocked up.

Of the five of the group under consideration who made good recoveries, three progressed to rapid convalescence, without serious complications, being able to dispense with the canula on the fourth or fifth day in each instance. In a fourth case, that of a girl, aged three, Edith Hannah, the copious expectoration of membranous shreds and viscid mucus occasioned, at times, much trouble. Troublesome dysphagia and albuminuria supervened, and it was not until the thirteenth day that the canula could be dispensed with, but after that date the convalescence was rapid. In the remaining case, a girl four and one-half years of age, Constance Hardcastle, it was not until the twenty-eighth day that it was possible to permanently remove the canula, although as early as the sixteenth day it was kept out for twelve hours, at the end of which time a gradually increasing dyspnœa made its reintroduction necessary. On the twenty-first day another attempt to abolish the canula was unsuccessful, an immediate replacement being necessary. The third attempt, after the expiration of a week, was successful, and without embarrassment.

Of the whole number of operations, there were four cases in which, after temporary relief, a fatal result was caused by the extension of the exudation to the smaller bronchi. The period after operation at which death supervened in these cases was quite uniform, having been 32 hours in three, and 36 hours in one case.

In fifteen cases, less than half the whole number, there was no appreciable extension of the exudate to the trachea. Of these, in one instance, a boy of three and one-half years, sudden death by syncope took place at the moment of the fixation of the trachea by a tenaculum prior to its section. Chloroform was being administered at the time, and I know of nothing else to refer the death to. The child's general condition was good, and no untoward complication had occurred in the progress of the operation. This was the fourth operation of the series, of date November 26, 1876. In succeeding operations ether has been used whenever an anæsthetic has been employed.

In four instances, death from diphtheritic toxæmia took place, at periods of 14, 22, and 48 hours, and of 9 days respectively. In the latter case the larynx was clear so that the canula was dispensed with on the seventh day. The immediate cause of death was uræmia. In three instances death was occasioned by capillary bronchitis. In one of these, which terminated forty hours after the operation, an autopsy showed the interior of the larynx to be completely blocked by a plug of exudate, and the entire bronchial mucous membrane inflamed, and the tubes, down to the smaller bronchioles filled with muco-pus. The second case died at the end of fifty-nine hours, and the third at the close of the sev-

enth day. This latter case might, perhaps, be justly included among the recoveries from the operation, for, after having successfully struggled against a copious secretion of viscid mucus within the trachea and bronchi, which demanded continuous watching and assistance for its removal, during the two days immediately following the operation, it had progressed favorably until, upon the fifth day, it was able to dispense with the canula. During the evening of the sixth day it was subjected to an unfortunate exposure, which determined a capillary bronchitis that terminated in death within twenty-four hours. Excluding this case, however, there remain seven cases of recovery out of the fifteen in whom the exudate did not extend to the trachea. Of these, five progressed without serious complication to early convalescence, being able to dispense with the canula after 3, 4, 4, 5, and 6 days respectively. Of the others, one, a boy of six years, was somewhat distressed by the copious accumulation of thick, viscid mucus in the trachea during the first forty-eight hours, but this subsided so that he was able to dispense with the canula at the close of the fifth day.

The remaining case of recovery was a child who had already been the subject of the operation. The croup in the first instance arose as a complication of an attack of measles, and the boy was insensible and *in articulo mortis* at the time of operation. On the fourth day he was able to dispense with the canula. Three weeks thereafter full cicatrization of the wound having been accomplished, an acute laryngitis was developed as the result of exposure, which again necessitated section of the trachea. It was not until the expiration of sixteen days that the canula could be finally dispensed with. I had no reason to consider that in either of these attacks there was any membranous exudation present. With the exception of these two cases, I believe that the exudate was in all cases of diphtheritic origin.

Reviewing the 31 cases of diphtheritic croup subjected to operation, it has been seen that 11 recovered and 20 died; that of the fatal cases, 8 succumbed to general diphtheritic toxæmia, complete relief to breathing having been secured by the operation during the remaining hours of life, 4 were asphyxiated by extension of the exudate to the smaller bronchi after a very short interval of relief by the operation, 4 died from capillary bronchitis, 1 from pulmonary œdema, 1 from chloroform syncope, and 2 from accidental asphyxia.

Reflection upon the conditions which these cases have presented to me has led me to the belief that great importance, so far as the final result is considered, attaches to the conditions which the trachea presents at the time of the section, or which may arise within it afterward. In a certain proportion of cases, where once the trachea has been incised and a new respiratory orifice has been secured, the simplest precautions to prevent damage from extraneous influences will alone be necessary to secure unimpeded and speedy recovery. In another group of cases the result of the tracheal section will be only to afford time for a more extended, and certainly fatal accumulation of exudate in the air-passages. But in quite a large number of cases the result, whether in recovery or death, will depend upon the thoroughness with which special conditions, chiefly intra-tracheal, are appreciated, and the skill with which they are treated. While there is no case in which it would be justifiable to omit any precaution or safeguard, in many cases the ultimate result will depend directly upon the faithfulness and thoroughness with which such precautions and safeguards are attended to.

The presence of diphtheritic exudate within the trachea, below the point of incision, constitutes the source of danger most frequently present, and the one most likely to become urgent. In two of my cases it has been seen that death was due directly to obstruction from loosened patches of exudate. In the majority of those who recovered, alarming obstructive symptoms occurred at some time in their course from difficulty in the ejection of shreds of exudate. At the moment of incision of the trachea it frequently occurs that more or less extensive patches of membraniform exudate are thrown out from the trachea, accompanied by much muco-pus. In other cases it is still possible to secure the detachment and expulsion of portions of the exudate at this time by the introduction through the wound of a suitable instrument, as a proper probang or a feather or forceps. It seems to me to be of importance that, in all cases in which the presence of a membraniform exudate in the trachea below the point of incision is found, effort should be made to remove it, and that from the beginning the operation should be planned and executed with this in view.

Cases of croup have been too generally regarded by the tracheotomist only from the standpoint of the immediate danger of suffocation that was imminent, the establishment of a new respiratory orifice being the only condition to be met. The processes of Chassaignac, and of Saint Germain, the numerous tracheotomes devised, the general delay of the operation till suffocation appears imminent; and the frequent advocacy of a rapid method of operating and the section of the trachea without regard to hemorrhage are based upon this restricted view. Thus regarded, the section of the trachea becomes a critical moment, and the immediate introduction of a canula of supreme importance. If, however, the indications for treatment presented by a tracheal exudate be of the importance that I have attached to them, operative methods must be adopted more suited to the search for and removal from the trachea of a foreign body, which, indeed, the exfoliating exudate is.

The importance of operating at a period sufficiently early to admit of deliberation in every step of the operation is necessarily involved in these views, as well as the staunching of all hemorrhage before the incision is made into the trachea. The place where the trachea shall be opened, also, is no longer left to the caprice of the operator, nor even to be determined by the anatomical conditions which make one point easier of access than another, but the lowest point possible, compatible with the necessary after-cares, is required for the fulfilment of the indications which have been elaborated. This incision should be free, and its lips should be kept apart, the opening being drawn up to the surface as much as possible, to admit of full exploration of the interior of the tube, and of the removal, so far as possible, of all substances from within it. Only after this has been accomplished is the placing of a canula in the trachea in order, the circumstances now being such as to preclude the occurrence of any of the traditional accidents connected with this part of the operation. As additional illustration of the importance of these operative details, the following case from the experience of my lamented friend, the

late Dr. Giberson, is worthy of citation. In this case, the patient was an infant of nineteen months, if I remember correctly. In the course of the operation much trouble was experienced from hemorrhage, and the child's extremity became so great that a hasty incision and immediate insertion of the canula was deemed necessary. Much embarrassment to respiration continued after the canula was in place, confined chiefly to expiration. This continued unrelieved, and was a prominent factor in determining the fatal result, which took place in about twenty-four hours. Post-mortem examination showed, occupying the central part of the anterior wall of the trachea, and extending from the first ring, about half-way down to the bifurcation of the trachea, with a prolongations till farther downward of less size, a polypus-like mass of exudate, the upper part of which adhered with some firmness to the wall of the trachea, while its lower part was loose, so that it could have been carried back and forth in the respiratory current. The incision had been made through the first two rings, and upon the lateral aspect of the trachea. The canula was inserted by the side of this pseudo-polypus, and as its lower end did not reach below the mass, this had been the source of the trouble in expiration which had been experienced, its free extremity having been carried up against the inner opening of the canula by every expiratory effort, partially occluding it, while it was floated away again at each inspiration.

A second case, again illustrating the importance of regarding tracheotomy for croup in the light of an operation for the removal of a foreign body from the trachea, occurred in the practice of my friend, Dr. Geo. R. Fowler. In this case, that of a girl aged three and one-half years, during the second day after the operation symptoms of tracheal obstruction developed suddenly, and with such force that asphyxia was imminent. The doctor being present, removed the canula, to more perfectly gain access to the interior of the trachea. Having introduced a pair of curved forceps at some depth into the trachea, he succeeded in grasping and withdrawing a large, irregular membranous mass. The urgent symptoms were relieved and ultimate recovery was secured.

I am satisfied from my own experience that few cases will be met with in which the opening of the trachea below the thyroid isthmus will not be perfectly practicable by methods of operation that will fully satisfy the indications for the after-management of the trachea that have been dwelt upon.

The two conditions that most seriously complicate the low incision are the greatly varying arrangement of blood-vessels in the pretracheal space and the embarrassing mobility of the mediastinal connective tissue, which is sucked down behind the sternum and thrust up again in front of the trachea to such an extent in the labored respiratory efforts when once this space has been exposed. These conditions become especially to be dreaded when a surgeon is required to operate without assistance. Two devices have enabled me to become nearly independent of assistants in the performance of tracheotomy, while at the same time they have greatly facilitated a rapid deliberation in all its steps. The first is the little catch-forceps known as the hæmostatic forceps of Péan. By them it is possible, not only to control all hemorrhage with facility, and without loss of time, but they serve as automatic retractors when fixed in the deeper parts of the incision, and caused to fall outward upon the side of the neck; and when fastened in the fascia that immediately envelops the trachea, they serve to elevate and fix it for incision and exploration. The second device is a retractor for the tissues at the lower angle of the wound, having a curved portion broad enough to confine and protect the tumultuously moving tissues at that point, having a shaft well arched, so as to clear the projecting upper border of the sternum, and terminating in a sharp double hook, which is to be fixed in the integument over the sternum after the retractor has been applied, thus holding itself in place, somewhat after the fashion of the double hooks of the anatomist. It is possible also to have a detachable handle adapted to this, to be used when the help of an assistant is available.

I have no sympathy with any tendency to the useless multiplication of instruments, nor to the complication of simple procedures, and yet I am convinced that the surgery of the trachea, in many instances, would be made more certain, more facile, and more productive of good results if the special conditions which it presents were more carefully studied and met.

In continuing the consideration of the treatment of intra-tracheal conditions, the question of the use of canulas is an important one. The necessities of the case demand that, if one is to be employed, it shall be as large as the trachea will easily admit, while, on the other hand, the larger its calibre, the greater the dangers from pressure effects. In the recent studies of Dr. Bloch, of Copenhagen (*Annals of Anatomy and Surgery*, January, 1882: Dr. H. J. Garrigues, from *Hospitals Tidende*), it appeared that, out of thirty autopsies upon patients who had died after tracheotomy, in sixteen the trachea had suffered from the pressure exerted by the canula, the seat of injury being the anterior or the posterior wall, or, most commonly, both simultaneously, and including every degree of effect, from simple anæmia and superficial erosion to destruction and perforation of its entire thickness. In the case which I detailed at the beginning of this paper, the extreme degree of evil effect from the pressure of the canula is illustrated. In this case I used one of the bivalve tubes known as Fuller's tubes, a kind of tube in which the inner tube must necessarily be tightly grasped by the blades of the outer one when the former is in place, so that much disturbance to the whole apparatus results from the force required to remove it, producing unavoidable injury to the trachea whenever its removal is required. I regard it as an instrument wholly bad, and one to be absolutely condemned. In this case the prolongation of the period during which the canula was retained to fourteen days, and the frequent removal of the inner tube required to keep it clear during this time, served to develop the full extent of the damage which it is capable of producing.

Still another, and hitherto undescribed source of injury to the trachea from the canula was demonstrated by Dr. Louis Carrié, in a thesis for the doctorate, before the Faculty of Medicine, Paris, 1879 ("Contribution a l'Étude des Causes empechant l'ablation definitive de la Canule après la Trachéotomie chez les Enfants." Thèse de Paris, No. 13. 1879). A young child, in whom for some cause difficulty was experienced in finally taking away the canula after tracheotomy, died in a fit of suffocation induced by cauterization of a reddish prominence, seen in the interior of the trachea. Upon autopsy it was found that, upon the posterior wall of the trachea, at a point directly opposite to where the section of the cartilaginous rings had been made,

where the canula had been introduced, there existed a reddish prominence, which, projecting into the interior of the air-tube, diminished notably its calibre, without, however, completely obliterating it. This projection, which had been perceived during life, at the bottom of the wound, was not formed by a mass of exuberant granulations, as had been thought, but by the posterior wall of the trachea itself, which had been thrown into a longitudinal fold involving its whole thickness, a folding which was owing to the pushing toward each other of the posterior extremities of the rings that had been separated in front to admit the canula. The same folding and in-pushing of the posterior wall was repeatedly reproduced experimentally on the cadavers of children by M. Carrié, and the final conclusion announced in the thesis, based on this case and upon the experiments, was that very often the introduction of a canula into the trachea of an infant produces a diminution in the transverse diameter of the posterior wall; that this posterior wall is made to project more or less markedly into the interior of the trachea, and that if this projection persists after the removal of the canula, and the cicatrization of the wound, a permanent constriction of the trachea will be produced. It should be noted that in subjects under two and one-half years of age, this folding of the posterior wall was not observed.

While the descriptions of this observer as to the changes in the posterior wall of the trachea may be accepted as correct, the canula has perhaps been assigned too prominent a rôle in relation to them, for it is evident that the separation of the incised tracheal rings in front alone causes this change in the structures behind. I have observed this protrusion forward of the posterior wall of the trachea when the lips of the tracheal wound were widely drawn apart, and in one instance remember to have mistaken it for a mass of exudate, having grasped it with forceps trying to remove it. By whatever means the tracheal wound may be kept dilated, this forward projection of the posterior wall may be expected to occur; and as soon as the margins of the cut rings are permitted to come together in front, the posterior wall may be expected to unfold, and the protrusion to be effaced, unless as the result of some irritation, inflammatory exudation shall have so complicated it as to render it persistent. The irritation of the canula, particularly if it be long retained *in situ*, would be a fruitful source of the conditions needed to make this source of obstruction persistent. The development of exuberant granulations, forming polypoid excrescences, projecting into the trachea in the rare instances in which they are intra-tracheal in their origin, may likewise be considered as the results of ulceration caused by pressure of the canula. The many references to this subject, and its frequent discussion in recent years, render nothing more than a passing allusion to it necessary here, especially as I have not met with this condition in any of my own cases.

In no case of my own, nor indeed, in any case in the practice of others that I have had the opportunity of observing, has the recommendation to dispense entirely with a canula, and attach the edges of the tracheal incision to the adjacent edges of the skin incision, been adopted, but as I have considered the subject, so great have the disadvantages attending the use of canulas appeared to me to be, that I feel impelled to practically test the possibility of conducting a case of tracheotomy without their use. The possible disadvantages from pressure-effects, which have been referred to, I know can be, in the majority of cases obviated, but in addition, it is true of the canula that it hides the wound from view, and often conceals the beginnings of processes that should demand active treatment at their outset; being with difficulty kept clean, it is likely to harbor putrefactive substances that may act as poisons to the adjacent tissues; it encroaches much upon the area of the new aperture which has been made, which it is important to preserve as free as possible to facilitate the discharge of intra-tracheal accumulations; and it converts a short, direct, and free communication with the interior of the trachea into a long, tortuous, and constricted one. It is probable, however, that in many cases the use of a canula in some stage of their progress will be imperative. I prefer, myself, as superior to any of the various modifications which have been proposed, the style of canula now most generally used, of silver, with movable shield, double tubes, curved upon a quarter circle, the inner tube projecting slightly beyond the outer one below, and both having the anterior portion of their lower extremity cut away slightly, the edges being well rounded, the outer tube without fenestrum, and, for use for children, with an average outside diameter of between seven and eight millimetres. The use of a suitable obtunder slightly projecting from the lower aperture will facilitate its re-introduction, and diminish to the minimum the dangers of excoriations and lacerations from such introduction in the later stages of the treatment of a case.

If a tube is to be inserted, it would seem advisable, in order to prevent the folding in of the posterior wall of the trachea and possible difficulty from that cause, to excise a portion of the anterior wall of the trachea to diminish the amount of outward drawing that the incised tracheal rings should be subjected to in order to accommodate the canula. In two instances I have done this. In both the patients recovered, and in both early suppression of the canula, one on the fourth and one on the fifth day, was accomplished without difficulty.

The after-treatment of the trachea, whether a canula be employed or not, may test to the utmost the patience and skill and tact of the nurse. That whatever exudate is still adherent to the walls of the trachea may be speedily loosened and safely removed; that no extension of inflammatory trouble shall be awakened, and that the secretion from the tracheal and bronchial mucous membrane may be held in check and its expulsion facilitated, is the task to be accomplished. In addition to the use of a thin layer of sponge, previously purified from any possibility of septic taint, moistened in hot water and continuously applied over the mouth of the canula, or upon the incision, I have derived great benefit, and in some cases believe that a favorable result was secured by the use, as circumstances seemed to require, of inhalations and instillations of various agents. Steam, alone, carbolized steam, vaporized Peruvian balsam and steam, and vaporized lime-water, have all seemed to be attended with benefit. Instillations of warm water simply, of chloride of sodium and water, of lime-water, and of dilute lactic acid have all been used at times. The results have been such as to encourage me to their use with still greater freedom and pertinacity in all cases in which any accumulation of membranous débris and tenacious mucous in the trachea becomes apparent.

In concluding these reflections, which are to be

considered rather in the light of suggestions based chiefly on my own experience, than as an exhaustive consideration of the subject, I would summarize them as follows:

First.—The proportion of cases of croup, demanding incision of the trachea for their relief, in which an intra-tracheal exudate will be found present is so great that it should determine the method of operating in all cases.

Second.—This method should include the arrest of all hemorrhage before the opening of the trachea, and the careful exploration and cleansing of its interior after its section.

Third.—The point of incision should be as low as practicable. Rarely will it be found impracticable to reach the trachea and open it below the thyroid isthmus.

Fourth.—Serious disadvantages attend the use of a canula of any kind. Their entire suppression is desirable. If imperatively demanded, especial care should be exercised to employ one which shall reduce these recognized disadvantages to a minimum, and to excise from the edges of the incised tracheal rings sufficient of their substance to obviate any tendency to the production of any infolding of the opposite posterior wall.

Fifth.—Topical applications to the interior of the trachea may, in many cases, be important, and in some essential to recovery.

INEFFECTIVE VACCINE VIRUS.

By H. J. GARRIGUES, M.D.,

OBSTETRIC SURGEON TO THE NEW YORK MATERNITY HOSPITAL, N. Y.

Recently a baby, in the reconvalescent ward of the Maternity Hospital on Blackwell's Island, was taken with small-pox. The child was immediately removed to the Small-pox Hospital, and all the inmates of the Maternity Hospital vaccinated. Among these were sixteen babies who were only from a few hours to a few weeks old. The vaccination was carefully executed by the physicians attached to the hospital, as I am satisfied from my examination of at least one-half of these vaccinated children.

Nevertheless the vaccination failed in fourteen, or in 87.5 per cent.! Fortunately, no other cases of small-pox occurred, but this was not due to the protection afforded by the vaccination. We might as well have got a most serious epidemic, so-called. Whenever a case of small-pox occurs it is the first sanitary rule to vaccinate and revaccinate all inmates of the house, and if this be done with efficient virus, applied in time, it is an almost sure preventive. Dr. C. Hansen, the late chief of the Royal Vaccination Institute of Copenhagen (Denmark), has reported a striking example of the value of vaccination under such circumstances. A baby nursed for five days a wet-nurse suffering from varioloid who had almost confluent pustules in the face. As soon as the nature of the disease was recognized, the nurse was removed, the child was vaccinated, and the vaccinia ran a perfectly regular course so as to be fully developed on the eighth day, while there did not appear any trace of small-pox in this individual, nor in any other member of the family, who all were revaccinated (Ugeskrift for Laeger, 1870, vol. ix., p. 382).

The virus used in the Maternity Hospital is that furnished by the Board of Health. But I have been unable to find any difference between virus obtained from three or four different sources.

In my private practice it has likewise struck me how unreliable the virus is which can be obtained here in the city. It is more an exception than a rule that the first vaccination takes. Within a year I have had three cases in which I vaccinated three times in vain before finally a fourth attempt was successful.

The fault cannot be in the method, for I scrape off the epidermis entirely from a square measuring a quarter of an inch, or a little more, and rub the virus on for at least a minute.

If often vaccination is attempted in vain, on the other hand the effect is sometimes so great as to become dangerous. I have seen the ulcer cover a surface as large as a quarter, surrounded by considerable swelling in the surrounding tissues, and giving rise to high fever. I have also heard of cases in which an amputation has become necessary, and of fatal cases, but I cannot vouchsafe the reliability of these reports.

A third fault in the bovine vaccine sold here in the city is the great irregularity as to the time in which the pustules are formed. I have several times seen this formation begin as late as the twelfth day, while in the Jennerian vaccination the development follows an almost mathematically regular course.

Finally, a process takes place on the abraded surface, which, I think, is only due to the mechanical injury, or an irritation produced by the stuff which is rubbed in. After ten or twelve days, small red protuberances rise on the place from which the epidermis was removed, and which has been covered with a scab composed of dried lymph, exuded from the open lymph-vessels, and combined with the substance rubbed on. These small protuberances grow in size, coalesce, and form a small tumor, much like half a raspberry in shape and color. No silver line appears outside of the abraded surface. The contents is only a clear lymph. The tumor does not suppurate, but dries up, forming a scab, which falls off without leaving any deep cicatrix. Once I inoculated some of the fluid on two babies. In one a similar eruption was produced, in the other no effect took place, and on both regular vaccinia was produced shortly afterward by inoculation of humanized cow-pox virus from another child.

This kind of eruption I believe to be very common, especially after revaccination, and it is scarcely necessary to point out the great danger of it. Laymen who see it always regard it as vaccinia, and, thinking their vaccination has "taken," they presume themselves protected against small-pox.

These are simple facts, gathered on a limited field of observation. I have not the time nor the opportunity to make a special study of the merits of different methods of vaccination, but I have seen enough in the literature on the subject to know that at least some of the above observations have been made on a large scale in institutes for vaccination in different European countries, and when I compare my present results with those I obtained in former years, when I either vaccinated from arm to arm or with virus taken by myself in a tube from one patient to the other, I cannot help regretting the change.

By the old-fashioned vaccination, as introduced by Jenner, effect takes place with very few exceptions. I have never had to repeat the operation more than once in order to secure vaccination in those in whom the first attempt had proved a failure. Non-humanized lymph fails very often, and

the operation has sometimes to be repeated many times before it brings on vaccinia.

We know exactly how many pustules we produce, or, at least, we know the maximum number which can come from the inoculation with a lancet. By rubbing the virus into an abraded surface we have no idea what we are doing.

In Jennerian vaccination the development is entirely regular, and so characteristic that whoever has seen a true vaccine pustule can tell when he sees another. In our present mode we get confluent irregular pustules, and are apt to be misled by false vaccinia.

"But," say the advocates of non-humanized virus, "by inoculating the lymph from one person to another we risk to transmit diseases." Only one disease has ever been proved to have been thus transmitted, namely, syphilis, and it is easy to avoid this serious accident. Even the Legislature may protect the population, as has been done in Denmark, where it is forbidden by law to take vaccine virus from a child younger than three months or from revaccinated persons. The reason of the former decision is that congenital syphilis almost always appears before that period; that of the latter is too evident to need any explanation.

ELASTIC TENSION THERAPEUTICALLY UTILIZED IN ADHESIVE AND MEDICATED PLASTERS.

By M. JOSIAH ROBERTS, M.D.

NEW YORK.

Some years ago I was so fortunate as to enjoy many courtesies at the hands of the late distinguished Professor John T. Darby. It was that most skilful surgeon and honorable gentleman who first directed my attention to the important role which india-rubber played in practical surgery. Observation in this direction having thus been inaugurated, the mechanical principle upon which its value depended, namely, elastic tension, soon became apparent. It was also evident that this elastic tension was a force that could be exerted in any direction, and developed by a great variety of substances. Since that time, whenever opportunity has been afforded, I have made use of elastic tension in the mechanical treatment of a diversified class of cases. The usefulness of this mechanical principle is so manifold, that I am astounded it has not received more general recognition by the medical profession as one of the fundamental principles of mechanical therapeutics.

In a paper which I had the privilege of reading before the Medical Society of the County of New York, * attention was incidentally called to the benefits to be derived from the use of elastic adhesive and elastic medicated plasters in the treatment of chronic articular inflammations.

It is my purpose now to make some specific statements in regard to the above-named plasters. More than three years ago I tried to convince one of the principals of a firm engaged in the manufacture of adhesive plasters in this city of the practicability of spreading various emplastra upon strips of elastic webbing. This, however, was declared to be impossible, owing to the necessity of putting great tension upon the cloth during the process of coating it with the adhesive mixture. The statement of this gentleman was but a temporary damper to my enthusiasm, for shortly afterward, in a few experiments conducted in my office, I convinced myself of the above suggestion, and demonstrated the practical utility of elastic adhesive plaster upon some patients then under treatment. The labor and inconvenience of preparing the plaster were so considerable, that for some months I made very limited use of it. Later, Mr. H. R. Spencer, of 154th Street, near Courtland Avenue, New York, succeeded in spreading some adhesive and medicated emplastra upon strips of elastic webbing such as garters are made of, and which can be had in any well-regulated dry-goods store. This proved to be far superior to any made by myself.

The reason for selecting elastic webbing instead of sheet-rubber, such as is used for dental purposes, or the solid rubber bandage, is that it, like the ordinary cloth upon which plasters are spread, is porous and readily permits of the evaporation through its meshes of the insensible perspiration of that part of the body to which it is applied.

The following named emplastra are those which I have most frequently made use of, and are applicable in a great variety of cases:

Emplastrum plumbi (U. S.), on account of its non-irritating properties, and also from the fact that it may be applied to the skin for weeks, months, or even years, without the absorption of lead taking place, is most serviceable where it is desirable to exert *continuous elastic compression* for the purpose of mechanically aiding the absorption of inflammatory effusions, or preventing the occurrence of the same following surgical operations. It may also be used as a strapping applied to parts requiring support. Spread upon elastic webbing and carefully applied to œdematous, eczematous, and varicose limbs, it retains its place much better than the solid rubber bandage, and, owing to its elasticity, is far less irksome to the patient wearing it than any non-elastic strapping. I have made use of this as a retentive and corrective agent in the treatment of club-foot, and with excellent results, as well as in overcoming various other deformities due to faulty muscular action.

Emplastrum adhesivum (Emplastrum resinæ, U. S.) owes its greater adhesiveness to the addition of resin to ordinary lead plaster. As would naturally be supposed, this plaster is useful when great, or at least considerable, tension is to be exerted upon a part, as its superior adhesiveness renders it less liable to slip when applied to the skin. I have used it with signal advantage in the treatment of fractures for overcoming muscular spasm. It is especially applicable in those cases of fracture in which a fragment, epiphysis, tubercle, or bony prominence is likely to be drawn out of place by muscular action. It can be advantageously used in the treatment of torticollis, in dislocations—especially those of the shoulder, and as a temporary dressing in drop-wrist, and in a diversified class of cases too numerous here to detail.

Emplastrum belladonnæ (U. S.), owing to its analgesic, antispasmodic, and absorbent properties, is pre-eminently useful in combating acute local inflammations.

Spread upon elastic webbing, and applied about joints in cases of acute synovitis, or other acute articular, or periarticular inflammations, its beneficial effects are very much augmented, owing to the elastic circumferential compression which is continuously exerted. I have also made noteworthy use of it in hydrocele and epididymitis.

* Elastic Tension and Articular Motion as Therapeutic Agents in the Mechanical Treatment of Chronic Inflammation of Joints, January 23, 1882.

Emplastrum aconiti (U. S.), locally applied, has a sedative effect upon the terminal nerve filaments, and will be found serviceable in dealing with acute and painful articular and periarticular inflammations.

Emplastrum ammoniaci cum hydrargyri (U. S.) is an old and deservedly well-known lymphatic stimulant. Spread upon elastic webbing its value is much increased, as an application to chronically inflamed joints. I might add, that its absorbent properties, enhanced by the mechanical effects of continuous elastic compression, are none the less apparent in the treatment of syphilitic nodes and chronic glandular enlargements.

The most magical effects, however, which I have yet obtained in the use of elastic medicated plasters, have been with the following, which was made for me and spread upon elastic webbing by Mr. F. Bagoe, pharmacist, of this city, in accordance with a formula which I furnished him, viz.: Venice turpentine, six parts; extract of belladonna, two parts; extract of aconite, two parts; magnesia, sufficient quantity to make a plaster mass.

The therapeutic effects which I have obtained by the use of this elastic plaster, in the treatment of acute, articular, and periarticular inflammations, have been so talismanic, that I fear the credulity of my orthopedic brethren would be overtaxed were I to detail them. The wonderful absorbent effects of turpentine, which I have for several years so frequently had occasion to observe, were what led me to incorporate it in an elastic plaster. I have no doubt but that other of the terebinthinates may be found equally serviceable.

The above enumerated emplastra may be spread upon strips of elastic webbing varying in width from three-eighths of an inch to an inch and a half or two inches, according to the necessities of the case. The amount of elastic compression which will be tolerated in a given case, will, as a rule, depend upon the amount of inflammatory effusion present; the greater the effusion and the more recently it has taken place, the more tolerant will be the patient to elastic compression, providing the parts below are previously covered with a firmly and smoothly applied roller-bandage. The elastic bandages are most conveniently applied in the form of a continuous strip rolled up as is an ordinary bandage. To avoid unpleasant experiences, and to obtain the maximum amount of good in the shortest space of time, considerable skill and mechanical tact will be requisite in the application of bandages, elastic and non-elastic.

In conclusion, permit me to say that it is hoped this communication will serve to stimulate others to make use of elastic adhesive and elastic medicated plasters.

With a view to making a subsequent report on this subject, I earnestly solicit criticisms from those who feel inclined to use elastic emplastra, or in any way make use of the therapeutic principles involved therein.

4 West Twenty-eighth Street.

A Debate on Nerve-stretching, recently, extended over three sessions of the Berlin Medical Society. It was opened by Langenbeck, who was followed by Westphal, Bardeleben, Bernhardt, Grael, Remak, Küster, Hahn, and others. The general tone of the discussion was rather unfavorable to nerve-stretching, especially in tabes.

Progress of Medical Science.

Resorcine versus Quinine in Malarial Affections.—Stillé's experiences with resorcine in the treatment of intermittent fever have not been very satisfactory. Of 13 cases in which this drug was administered, in 5 the result was favorable, in 6 it was only palliative; while in the 2 remaining no effect at all was noticed. These last two classes were, however, promptly cured by quinine. The smallest dose of resorcine was 0.3 gramme, given to a boy of three years, without benefit; the largest dose was four grammes, also without the slightest favorable influence. The average dose should be about twice as large as that of quinine. (The administration of resorcine in quantities greater than three grammes has produced alarming symptoms, although Stillé states that nothing of a serious character was observed in his cases).—*Betz's Memorabilien*, January 10, 1882.

Heaton's Operation for the Radical Cure of Hernia.—The Heaton method consists, as is well known, of irrigating the inguinal canal and rings with a preparation of white oak bark in solution. The fluid recommended is composed of white oak bark in solid extract, fourteen grains in amount, to which is added half an ounce of the fluid extract of the same drug. The two are then gently heated together. The mixture is thick and muddy, and requires shaking before it is used.

The operation is thus described by Dr. George W. Gay, one of the surgeons of the Boston City Hospital: Having reduced the hernia and if possible the sac, an instrument resembling the hypodermic syringe is charged, and then thrust directly through the skin into the external abdominal ring, the point of the needle then being carried up the inguinal canal in front of the spermatic cord, as far as the internal ring. The fluid is deposited slowly while withdrawing the instrument, the point of which is to be moved about in all directions, in order that the astringent may be evenly distributed throughout the canal. A compress and bandage are then immediately applied, and they should be worn for some weeks. If the operation prove successful, nothing further is required to be done. The object is to set up a moderate inflammation, for anything like a severe reaction prolongs convalescence and adds nothing to the success of the operation. It is intended in the operation to bathe the fibrous structures in contact with the neck of the sac, but in many cases it is by no means certain that the needle does not enter the perineum. At any rate, in Dr. Gay's experience (23 operations in 15 cases) peritonitis has never resulted. Of the total number, a cure is recorded in 4, relief was given in 8, and there were 3 failures.

A part of this non-success is attributed either to a lack of skill or experience in the operator, to imperfect after-treatment, or finally the unwillingness of patients to undergo the secondary operation which is often necessary.

Taking inguinal hernia alone as a test for the method, it is thought to be safe, comparatively easy of performance, and attended with little pain or danger. In a certain number of cases it will cure, especially when the rings are small, or where, as in children, nature is attempting to correct the vicious condition of the part, but needs a little assistance.—*Reprint from Boston Medical and Surgical Journal*, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, April 1, 1882.

THE AMERICAN AMBULANCE SYSTEM ABROAD.

THE hospital authorities of London have at last determined to adopt the ambulance system of hospital service. The earnest and well-timed advocacy of the necessity of this measure by Dr. Benjamin Howard, formerly of this city, has been the principal means to this desirable end. His experience during the late Confederate war gave him ample facilities for mastering the details of transportation, and he has utilized them in a practical manner by constructing an ambulance carriage which is adapted to all possible emergencies of street accidents. It is modelled after the American ambulance, as used in this city, and is claimed to be an improvement on the same. Although, practically speaking, this does not seem possible, the London carriage is considered by the hospital authorities to be the perfection of construction, and to be capable of answering every purpose. As might have been expected, however, there is considerable discussion regarding the application of the system to the needs of the public on the one hand and the capabilities of the hospitals on the other. Fears are expressed that the hospitals will be overcrowded with accident cases, and that the extra funds for their maintenance may not be forthcoming. From an American point of view this seems to be somewhat absurd, inasmuch as there is a laudable ambition on the part of all our large hospitals of obtaining all the acute surgery possible. Indeed the different ambulance surgeons manifest almost an inordinate zeal in securing and hurrying away with all the wounded within their reach, only too glad for an opportunity of filling the accident wards to the uttermost. Nor do the hospital authorities object to the number of patients received under such circumstances. It is acknowledged that one of the main objects of our hospitals is to care for these very cases, almost to the exclusion of patients who are afflicted with chronic or incurable maladies. Nor does this practice militate against the pecuniary prosperity of the several institutions, inasmuch as the number of accident cases cared for governs the amounts contributed by the benevolent. It is a proof to them of the way in which their moneys are utilized.

The organization of the system in London appears to us to be an unnecessarily complicated one. It is believed to be best to place the ambulances under control of the municipal authorities with the implied understanding, as it appears, that every hospital shall be prepared to receive all cases sent to them. This will be obviously unjust to smaller hospitals without requisite facilities, and may seriously hamper the extended usefulness of the scheme. Much better would it be for each hospital to control, as here, its own ambulance service, subject to the call of the police authorities of its particular district. This plan has worked very satisfactorily with the larger hospitals in this city, and it is difficult to see how it can be improved upon. In cases of emergency demanding the use of the ambulance system, there is not time for unravelling the length of red tape which occasionally may happen in the best regulated municipal government.

THE MEDICAL HISTORY OF HOUSES.

A WRITER in a recent issue of the *Lancet* has broached the very sensible idea that some measures should be taken to furnish tenants with the medical history of their houses. It is well known that much disease is spread among families who are constantly changing their residences, by the unsanitary condition of apartments which they hire. In many instances the houses are rented at low figures because of defective drains, damp cellars, bad plumbing, unhealthful surroundings, or perhaps because of the previous habitation of them by persons afflicted with contagious diseases. It does not seem to be an impossibility for the health authorities of the different towns to have a list of houses in which contagious diseases have been known to occur, or in which conditions inimical to health are known to exist, for general reference by the public. Such a list would be of great value to the large number of families who are at this season of the year looking around for new homes. In all instances a critical examination of the cellars and drains is more important than the inspection of the parlors and upper floors. And yet, how seldom is this done, and how often the tenants suffer in consequence. If health boards would keep a black list of unhealthy houses the landlords of the same would find it to their interest to look more particularly to the sanitary welfare of their tenants.

THE TREATMENT OF SYPHILIS WITHOUT MERCURY—A NEW ABORTIVE METHOD.

Dr. J. Edmund Güntz, of Dresden, in a work just published by him, makes some novel announcements regarding the treatment of syphilis. If true, they are of the highest importance, for he claims to be able 'not only to do away with mercury in syphilis, but in a large proportion of cases to abort the disease.

It is now over twelve years since Dr. Güntz first wrote on this subject. He is, therefore, not a novice in the matter. In 1869 he advocated the use of bichromate of potassium as being a useful drug in treating syphilis.

He could not prove any very great advantages for it, however, at the time. It acted slowly and was apt to disturb the stomach, but being convinced that there was something in the drug, he set at work to find some way of getting more into the system without producing functional disturbance. For a time he combined the bichromate with the nitrate of potassium, and gave pills containing about $\frac{1}{10}$ gr. of each three times a day. With these pills he produced "remarkably favorable results." Yet the action was slow, and when a prompt amelioration of symptoms was needed, as in malignant cases, the remedy would hardly meet the expectations.

From the favorable results obtained by giving the various minerals in solutions with carbonic acid water, our author was led to attempt administering chromium in the same way, and with, as he now claims, very great success. He found that much larger doses could be taken in this form, and that a profounder impression on the system could thus be made. As a maximum dose he was able to give three and a half grains (.3 grammes) daily of bichromate of potassium in about 600 grammes of carbonic acid water, this being divided into five doses. Larger amounts provoked vomiting.

This "chromwater," as he calls it, could also be given daily for weeks and months in all forms of syphilis without detriment to the health.

Having described his method of giving the drug, Dr. Güntz discusses its action upon the initial stage of syphilis and upon the disease itself after its full development in the system.

In estimating the possible value of any drug as an abortive of syphilis, the numerous sources of error are referred to. The existence of and difference between true chancre and chancroid are admitted.

The following are his statistics :

Within one and a quarter years the author treated 194 cases of chancre. For comparative study he selects only 85 of these, since in the others there were sources of error. In 14 of these 85 cases the sores were cauterized. The remainder were treated with nothing but the chromwater; and in 47 of them constitutional syphilis failed to appear. In order to avoid every possible chance of mistake the author excludes 10 of this 47. Even then there were left 37 patients, or over one-half, who, when given chromwater alone, developed no after-symptoms. It is not stated, however, how long they were watched, except that 18 were under observation for 159 days.

Still more favorable results took place with the 14 cases in which the initial lesion was cauterized. Of these only two developed symptoms of constitutional syphilis.

Of the 85 patients, therefore, presenting, as Dr. Güntz asserts, initial lesions of syphilis, 49, under the "chromwater" treatment, remained entirely free from the disease. This is certainly a very extraordinary showing and will be received with a great deal of incredulity.

If this new agent is given after constitutional symptoms make their appearance, its action is to ameliorate the disease and hasten its course. It is efficient even in cases where mercury fails, and it acts more pleasantly and promptly. In fact, the disease is "in the shortest time definitely cured."

The author has, for several years, used the chrome salt exclusively in the treatment of syphilis, and has given it in more than a thousand cases. He thinks that the day of mercury is over. He has recorded the histories of a large number of his cases.

Dr. Güntz has also used his chromwater with the best results in diphtheria.

He suggests that the drug acts by reason of its powerful oxidizing properties. Without committing himself to any germ theory, it is thought that there is certainly a specific poison which develops in the various contagious diseases. And in chromium we have an agent that is inimical to the syphilitic poison while it does not harm the system itself, but rather benefits it.

The importance of Dr. Güntz's claims, and the caution with which they should be received, are alike apparent and need no comment.

A PLEA FOR IRREGULAR PRACTITIONERS.

A correspondent of the *Times*, who writes with too much fairness to be personally interested, puts in a plea for the irregular practitioners. His argument contains nothing new, but it presents that side of the question with unusual force and clearness.

He says : "No matter what may be said or enacted, there are many people who have lost all faith in regular practitioners, even the most eminent, and who have faith in some irregular practitioners, perhaps even in some quack. Now, to say to these people, You shall not consult whom you choose, and if you will not be treated by a regular with a diploma you shall not be treated at all, does not seem right." "If a man believes he can be helped when sick by any one, whether with a diploma or not, he will

think himself injured and deprived of his rights if forbidden to consult that person, as he virtually would be by this act. It may even be a question if such a law, so abridging a man's rights to seek advice where he chooses, is constitutional."

The argument is speciously candid.

The facts, however, are only given for one side. The object of law is to protect society. Laws are framed to do this with as little interference with individual liberty as possible. The medical profession as a mass (not the "eminent men" alone) advocate a medical law, because they believe that the safety and good health of society demand it. If it narrows slightly individual choice, this is a minor evil. Many laws do the same. It seems to us that every candid and intelligent man will admit that it is safer for society not to allow men who have no medical education, and, generally, no scruples, to offer to treat disease, and thus to take upon themselves the responsibility of life and death.

It is charged that medical men wish the law in order to protect themselves—that it is the project of a trades-union.

We answer that the chief object, as stated above, is to protect life and prevent suffering, especially among the ignorant members of society. The medical profession naturally urges the law most strongly because its members are best able to know the injury which ignorance and inexperience can do. They know, too, how easily credulous the people are toward any pretences of a medical character.

We are quite willing to admit that there is some of the *esprit du corps* in our position. We do not like to run a race with old hacks, or contest the game of life with gamblers and cheats. The instinct of self-respect and self-preservation is natural and just.

But the main point is that the proposed medical law is one intended primarily for the protection of society, and not for the benefit of the physician.

SOME FURTHER EXPERIMENTS REGARDING BACTERIAL PATHOLOGY.

SOME recent experiments by Rosenberger, of Wurzburg, are of especial interest in connection with the report on diphtheria reviewed in our last issue.

Dr. Rosenberger took the blood or secretions of animals (guinea-pigs) which had died from septicæmia. The septic fluid contained large numbers of micrococci, and, when inoculated, was actively virulent in minute amounts.

He heated this virus to a temperature of 140° C. (about 300° F.) for two hours, and then injected this cooked virus into his experiment-animals. He found that they still died of septicæmia; also that their blood was full of the micrococci ordinarily seen in septicæmia, and that a small drop of it was as actively poisonous as in septicæmia produced by ordinary methods. The cooked virus was proved to be sterile, so far as organisms are concerned, by placing some of it in meat extract, which remained clear for weeks. It is stated also that this heated virus was filtered, in some cases at least, but that it was still active. It was, however, in no case so active as the original virus, since at least a cubic centimetre was needed to produce a fatal effect.

Dr. Rosenberger's conclusions from his experiments are that heat, while it sterilizes or destroys the micro-organisms of septicæmia, does not destroy the virus, which must be, therefore, a chemical or unorganized body. It is further inferred that this virus has the power to cause the rapid development of bacteria in the body, but that these bacteria are only secondary elements in the disease. Nevertheless, the bacteria play an important rôle, for by them the poison is spread and increased in amount.

According to this view of the pathology of septic diseases, neither micro-organisms are alone the cause, nor a chemical poison. A union of both is necessary.

Dr. Rosenberger's experiments are very suggestive, and do not seem improbable. Several recent investigators have apparently shown that innocuous organisms may become poisonous, and this was the view offered by Wood and Formad in explanation of the development of malignant diphtheria. We find, however, one statement made regarding Rosenberger's experiments, which throws some suspicion upon his accuracy. He says that the cooked virus was also filtered, and that the clear filtered fluid was poisonous. Now, it has been shown by Curtis and Satterthwaite that the infectious material of putrid and diphtheritic substances is particulate, and will not pass through a fine filter. It is not to be supposed that the septic virus exists in any different state. We must, therefore, wait for some confirmation of Rosenberger's experiments before drawing any conclusions from them.

WHAT IS HE GOING TO DO?

THE graduation of some five or six thousand young medical men during the present spring is an event of deep importance to the profession. What are they going to do? is the question asked, not only by the parties especially interested, but by the profession and public at large. The New York *Times*, which always discusses medical questions with more than ordinary fairness and intelligence, has recently applied itself to the problem just suggested. There is now, it says, in the United States one physician to every five hundred inhabitants. The ratio of sick to well during the year is estimated at about twenty per one thousand, including the paupers. This would give about ten patients to each practitioner; but of these many are too poor to pay, and many do not call in a physician, so that five or six patients are all that can be allowed for each medical man.

Another method of studying the question is as follows: The ratio of deaths is, for the whole country, not far from twenty per one thousand annually. For every death there are about twenty-five cases of sickness, or five hundred cases per one thousand annually. This would give an average of two hundred and fifty patients per year for each physician. But this number must be reduced nearly one-half, by subtracting those who do not pay, and those who are not ill enough to need a physician. With the present number of physicians, therefore, there would be two or three patients per week for each, if they were equally divided.

What need is there, then, for six thousand new doctors annually? If they do what they expect, if they practise and prosper, it must be at the expense of those already in the field.

SUNDAY RECREATIONS.

Several leading clergymen in this city have boldly spoken in favor of suitable recreation for the laboring classes during the Sabbath. The subject is certainly one of more than passing importance. Affecting as it does the physical as well as moral welfare of communities, it deserves free and candid discussion. The working classes are interested more particularly in any proposition having for its object a weekly respite from the daily routine of toil. To restrict their much needed rest to attendance upon church and the observance of puritanical rules of conduct is neither reasonable nor philosophical. Rest is a purely relative term and is associated more or less with enjoyable relaxation of mind and body. The true indications for either are not always fulfilled by listening to a prosy sermon in the morning and by dozing over a religious periodical in the afternoon. To many these occupations are spiritually restful and physically recuperative, but with the larger majority something more is needed. Clerks, mechanics, and laborers are almost entirely debarred from any recreation whatever save what can be obtained on the Sabbath. By such a trip into the country, a stroll in the woods, or an excursion to the seaboard may hardly be considered as mortal sins. The day of rest should not be made irksome by the enforcement of arbitrary rules, even as affecting Christian observances. Innocent amusements cannot possibly be antagonistic to them. In fact, the people who can rest only on Sundays should be encouraged to avail themselves of every opportunity for change of conditions and surroundings. Our free libraries should be opened to the men and women who can use them at no other time, and our picture galleries can in no more effectual manner fulfil their higher missions than by fostering a taste for the pure and beautiful among those whose better days are spent in the dull hard drudgery of bread-winning.

THE AMERICAN RED CROSS SOCIETY AND THE MISSISSIPPI SUFFERERS.

The American Red Cross Society has very properly come to the front with an appeal for the aid of the sufferers from the flooded districts along the Mississippi. As will be recollected, this organization is a branch of the Society of the Red Cross of Geneva, and has recently been created in this country with the twofold object of succoring the wounded in time of war, and during peace of affording assistance to all such as suffer from floods, pestilence, and fire.

We have before taken occasion to refer to the good offices which this society can render in just such calamities as the one under consideration, and that its national character peculiarly fits it for the same.

There is no more practical way of proving its utility and the real reasons for its organization than in the manner and method of its appeal.

Reviews and Notices of Books.

A Manual of Organic Materia Medica. By John M. Maisch, Phar. D., 12mo, pp. 459. Philadelphia: Henry C. Lea's Son & Co. 1882.

In this little work we find a catalogue of the drugs derived from the animal and vegetable kingdoms. Each article is considered as to its origin, habitat, description, constituents, and properties. These divisions are, except the last, briefly but admirably written, but belong rather to the department of pharmacognosy than materia medica as commonly understood. In pharmacology and pharmacognosy Professor Maisch stands pre-eminent as a writer, but in the few lines devoted to the "properties" of drugs, he carries us back full fifty years, and again defies the old proberb, "*Sutor ne supra crepidam.*" The book is well printed on fine paper, and suitably illustrated.

The Child of Promise; or, The Isaac of Medicine and Ishmael the Half Brother, etc. By William Mellen Cate, M.D. 12mo, pp. 280. Washington: H. B. Burnham & Co. (N. d.)

This work, so far as we can understand it, appears to be an attempt to draw a parallel between regular medicine and homœopathy on the one hand, and certain scriptural facts on the other. The attempt is conceived in bad taste and carried out with little regard to logic.

Sir Thomas Browne's Religio Medici, Letters to a Friend, etc., and Christian Morals. Edited by W. A. Greenhill, M.D. London: Macmillan & Co., 1881.

The author of this famous little book was born in London, in 1605, three years before the birth of John Milton, and eleven years before the death of Shakespeare. He was educated at Winchester and Oxford. He afterward studied medicine on the continent and took his degree at Leyden in 1633. A few years after, he settled at Norwich, where he remained during the rest of his life as a practitioner. He was a man of rare genius, possessing great intellec-

tual power and extensive learning. Coleridge speaks of him as the "philosopher of Norwich."

He was the author of several books and pamphlets, but his greatest work was the "Religio Medici." He tells us in the preface that it was not intended for publication, but was "composed at leisurable hours for his private exercise and satisfaction." The manuscript of this work was loaned to his friends, and by some of them transcribed and published without the author's knowledge or consent, in 1642.

Sir Thomas himself, soon after, gave a new edition to the world.

During the author's lifetime there were no less than eight editions of his work published, and since that day many editions have appeared. The author died in 1682, just two hundred years ago. Surely a book which has lived so long, and of which a new edition has just been brought out, ought to contain something worth the reading, and that it does no one who has carefully read it will deny.

The "Religio Medici" is made up of reflections, often quaint and curious, but always original, upon the doctrines of the Christian religion and upon Christian conduct and life. The being of God, the Trinity, the nature of the Soul, Creation, the Bible, Miracles, Faith, Providence, Sleep, Charity, Death, and Resurrection—these are but a few of the many themes which the author discusses in his striking and original manner. Only occasionally does he refer to his profession. On page 137 he says, "Some think there were few Consumptions in the Old World, when men lived much upon milk; and that the ancient inhabitants of this Island were less troubled with coughs when they went naked and slept in caves and woods than men now in chambers and feather-beds."

In his "Letter to a Friend," written on the occasion of the death of an intimate friend, he refers incidentally to certain diseases prevalent in his day.

The "Christian Morals," which have been called "a continuation of the Religio Medici," was written near the end of his life, and was published after his death. Though full of quaint and original savings, it is in many respects inferior to the "Religio Medici." It shows greater learning in the more extended use of Latin quotations and in the more frequent reference to the events of ancient and mediæval history. The same deep vein of piety pervades the book, and it shows the author's wondrous insight into human character.

In the "Appendix" we learn that in 1840 some workmen who were employed in digging a vault in the chancel of the church of St. Peter's Mancroft, Norwich, accidentally broke, with a blow of the pickaxe, the lid of a coffin, which proved to be that of Sir Thomas Browne. The bones were found to be in a good state of preservation. The skull, which was particularly well preserved, is now kept under a glass case in the Museum of the Norwich Hospital. What would the good and saintly Sir Thomas have said if he could have foreseen this; for on page 65 of "Religio Medici," he says of himself, "At my death I mean to take a total adieu of the world, not caring for a monument, history, or epitaph, not so much as the rare memory of my name to be found anywhere but in the universal register of God." And in his "Letter to a Friend" he calls it a "tragical abomination" for us "to be knaved out of our graves to have our skulls made drinking-bowls . . . to delight and sport our enemies."

In the last paragraph of the "Religio Medici," "our Physician concludeth that there is no happiness but in God," and we conclude by saying that this is the most complete and satisfactory edition of this classical work which has yet appeared. The editor, Dr. Greenhill, deserves great credit for the pains he has taken and the amount of patient labor he has expended in the preparation of his notes and in the very complete index.

Transactions of the Medical Society of the State of New York. 1881.

As the contents of the volume have already been mentioned in detail in our report of the proceedings of the society, published a year ago, it will only be necessary at present to refer to the contributions on medical topics which are of unusual interest, and impart a special value to the work. Among the most instructive articles are the following: "The Treatment of Double Talipes Equino Varus by Open Incision," by A. M. Phelps, M.D., of Chateaugay, N. Y.; "Early Diagnosis of Some Nervous Diseases," by E. C. Seguin, M.D., of New York; "Cicatricial Contraction of the Thumb and Fingers, and of the Palm of the Hand, Resulting from a Burn," by A. C. Post, M.D., LL.D., of New York; "Sympathetic Neuro-Retinitis," by David Webster, M.D., of New York; and "Pathology of Orbital Tumors," by C. S. Bull, M.D., of New York. The volume presents its usual attractive appearance, and constitutes an important part of the literature of medical society transactions.

The Diseases of Women. By Arthur W. Edis, M.D., Lond., F.R.C.P., M.R.C.S. Philadelphia: Henry C. Lea's Son & Co. 1882.

It has been the endeavor of the author of this volume to give such an account of the diseases incidental to women as will prove a reliable, practical clinical guide to the student and practitioner. His article on "Means of Physical Diagnosis" is a detailed enumeration of the various means for the determination of variations from the normal condition of the female generative organs. In treating of the subject of displacements of the uterus, after dismissing the causation and symptomatology rather briefly, he dwells at considerable length upon the mechanical treatment, in order to fairly represent the question, not to recommend the practitioner to place too much reliance upon mechanical contrivances. The inflammatory and functional disorders of the viscus are each dealt with in such a manner as to bring out their most salient points. The chapters on "Abdominal Tumors" are quite exhaustive, great stress being placed on the importance of accuracy in making differential diagnoses; to this end special attention has been given to the classification of symptoms. The author ascribes to hysteria, as a distinct disease, sufficient significance to devote to it one chapter, in which he considers its pathology, causation, symptoms, and treatment, stating as his belief that the essential character of the morbid state is an exaggeration of involuntary motility, and a diminution of the power of the will; the emotional, sensational, and reflex movements are in excess, while the voluntary are defective. The illustrations chiefly consist of diagrams representing the various displacements of the uterus, methods of operation in cases of ruptured perineum and vesico-vaginal fistulæ, and differential diagnoses of tumors. Figures of instruments likely to be of use to the practitioner have been incorporated in the text. While the

volume lacks evidence of original research and presentation of new pathological developments, it is a very useful book to the general practitioner, because of simplicity and conciseness in the arrangement and consideration of its subject-matter.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF WISCONSIN.

DR. SENN has contributed, in the present volume, an article on the "Progress of Surgery" that gives an admirable epitome of the year's work, and evinces an unusual degree of painstaking labor and discrimination. Dr. J. G. Meachem, Jr., in his report on "New Remedies," has another most commendable article, wherein he differs from many of those who have essayed similar enterprises under the inspiration of enterprising drug-houses. After enumerating some twenty-four new remedies, he says, in all probability, not more than half a dozen will prove to have a permanent value. And yet he realizes, with every intelligent physician, that pharmacy and chemistry have done and are doing much for us at the present time, by giving us the means of administering effective remedies under some agreeable form.

With a series of reports such as these, and made to embrace the chief topics into which medicine is now divided, each member of the society might have a handbook of reference that he would be compelled to consult, and from which he could always get pleasure and profit.

Reports of Societies.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 24, 1882.

DR. T. M. MARKOE, PRESIDENT, IN THE CHAIR.

THE paper for the evening was read by DR. LEWIS S. PILCHER, and entitled

THE CARE OF THE TRACHEA AFTER ITS INCISION FOR THE RELIEF OF CROUP. (See p. 342.)

DR. A. C. POST said that he was present at the American Medical Association when Dr. Martin read his paper on tracheotomy without tubes, and was much interested in the experience which the writer gave at that time. Before resorting to this method Dr. Martin had, in common with surgeons in general, anxiety with reference to keeping the tube unobstructed, necessitating not infrequently the attendance of skilled assistants to watch the patients. The writer mentioned that upon one occasion he was obliged to perform the operation and had no tube at hand, and he then tried the plan of keeping the edges of the wound open without a tube and found it satisfactory. After that he operated several times and intentionally left the tube out, and had been pleased with the results. Dr. Post had resorted to Dr. Martin's method in two cases where he wished to perform tracheotomy as a preparatory step to a subsequent operation, and in both instances he found it eminently satisfactory. By attaching the lining membrane of the trachea to the skin with sutures, and drawing the lips of the wound apart, and securing the thread with adhesive plasters about the neck, a much larger opening was maintained in the trachea than could be by the use of the tube. In both his cases it was easier to keep the opening free from obstruction than when the tube had been employed for a similar purpose. In Dr. Martin's cases the opening was maintained for a number of consecutive days without inconvenience. Probably it would be advantageous, in many cases, to dispense with the tube and adopt Dr. Martin's method.

DR. JAMES L. LITTLE remarked, that in a paper read before the society March 23, 1880, he called attention to the difficulties sometimes met with in permanently removing the tube after tracheotomy. Since then he had had *three* cases of recovery after tracheotomy for croup. In the first case the tube was allowed to remain three months, in the second nine months, and in the third it was removed at the end of the eleventh or twelfth day.

The tube was allowed to remain for the reason that the children—one being five years of age—had difficulty in breathing and speaking as soon as the tube was removed, and, following the rule given in his paper, he allowed it to remain until the children could breathe freely and speak distinctly, thus showing that all obstruction between the tracheal wound and the mouth had disappeared. In one of the cases, reported at the time he read his paper, the tube was removed after it had been worn three weeks, and the patient nearly suffocated before it could be replaced. After it was reinserted it was allowed to remain nearly three months before the child could breathe freely and speak distinctly. The non-fenestrated tube was used, because he had found that the fenestrated one was frequently a source of considerable irritation.

DR. LITTLE asked Dr. Pilcher if he had experienced any difficulty in removing the tube permanently. He also exhibited a tracheotomy tube made of aluminum. It was lighter, less apt to corrode, and less expensive than silver. It was the first tracheotomy tube that had been made of this metal, and was of the usual shape, but non-fenestrated.

DR. PILCHER said that the only one of his cases in which there was serious difficulty in removing the tube permanently was that in which it was retained for twenty-eight days. In all the other cases in which recovery occurred it was possible to remove the tube by the seventh day. In the case from which the specimen presented to the society was taken, it was not until the fourteenth day after the operation that the canula was dispensed with. He was inclined to think that he should make more persistent efforts now than at that time to suppress the tube. The possible evil effects are so great that efforts should be made to remove the tube at the earliest possible moment.

DR. LANGE asked as to where the opening in the trachea was made in Dr. Martin's cases, above or below the isthmus.

DR. POST thought that it was below.

DR. LANGE had adopted Dr. Martin's method in one case. The patient was a year and a half old, and very fat. The opening was made above the isthmus, and he subsequently found that there was constant danger of its being entirely closed by the child covering it with the chin. He was obliged to lay the child's head quite low, and to carefully watch the opening. The child died on the second day as the result of the disease for which the operation was performed.

He had performed tracheotomy twenty-six times with nine recoveries, and had not seen serious disadvantage from the use of the canula. In a few instances slight erosion within the trachea occurred; at least it was so assumed, because of very

slight streaks of blood seen in the sputum. He always used the fenestrated canula, as wide a one as possible, and removed it as early as could be done. After five or six days he removes the internal tube, and then uses a cork, which closes perhaps one-half of the external opening, and from day to day a little larger cork is used until finally the opening is entirely closed. If the child is able to sleep one night with the canula entirely closed, he removes the canula, and in none of his cases had it been necessary to use it again.

He had never seen so-called granulations except in one case, where they may have occurred after the external opening had been closed. In that instance dyspnœa occurred, but disappeared after the child had a severe fit of coughing attended by expectoration of a small fleshy mass, probably granulations. No farther trouble ensued.

Dr. Lange had also, for the most part, dispensed with inhalations, because he had not been able to see that they were of any special service, either as palliatives or to check the progress of the disease. The only benefit he had seen from their use was that, perhaps, in some cases, expectoration was rendered easier. As a substitute he applies a disinfected sponge, moistened at short intervals with tepid water and changed as often as cleanliness requires. He recently endeavored to disinfect the external wound, before opening the trachea, by washing it with a solution of carbolic acid or powdering it with iodoform, and he never covers the wound afterward except to put a small rag, covered with vaseline, under the lower edge where the expectoration comes, and twice a day iodoform is powdered behind the canula. He had had diphtheria of the wound occur only once after this plan had been adopted, and in that case final recovery took place.

Dr. Lange had not had the impression that early tracheotomy, by which he meant tracheotomy at an early stage of the disease, rendered prognosis more favorable. All the patients upon whom he had performed the operation early had died. Such a result might be explained by the severity of the disease, but he was under the impression that in most of the cases in which good results were obtained the tracheotomy was performed at a time when the process of the disease had begun to yield, the bebinning of the end of the disease had appeared; and the children, so far as the disease was concerned, were approaching recovery. On the other hand, he had had two cases of severe diphtheria in which recovery took place, although in one of them the disease extended from the nose and fauces to the bronchi, and the child expectorated shreds of membrane for ten or eleven days. With reference to the time when the operation should be performed, he thought that, as yet, no rules could be laid down. The operation was solely a symptomatic one, as he thought, and was important simply because it gave the patient a supply of air.

Dr. George R. Fowler, of Brooklyn, on invitation by the President, said that his experience in tracheotomy extended over a series of twenty cases, with a saving of 25 per cent., perhaps rather below the average results obtained by gentlemen who had performed the operation in a large number of cases. In reflecting upon that series of cases in connection with Dr. Lange's remarks, he was impressed with the fact that if there was one thing more than another which aided in obtaining the best results, it was the early performance of the operation. He also recalled the fact that, in two of his successful cases, the disease had reached the stage when suppuration existed between the mucous and the pseudo membrane, and casts of the trachea, more or less complete, had been expectorated. He was also impressed by the fact that, in the vast majority of fatal cases, the patients died from secondary processes in the pulmonary alveoli, or the finer bronchial tubes, and he was ready to believe that those processes had been set up, before the operation, by the suction force of the continued labored respiratory efforts.

As to dispensing with the tube, he had been led to believe more and more that it was a source of troublesome irritation, and frequently of a fatal result. He believed that its presence frequently caused ulceration of the tracheal walls, especially when the most common form of tube was used. It had been his misfortune to have one patient die from hemorrhage into the trachea following the use of a fenestrated tube, and he thought it was caused by the pressure of the sharp edge of the opening against the tissue that came up into the tracheal wound. That led him to say that he thought the fenestra is almost always placed too high up in the tubes in ordinary use. He devised the instrument exhibited by Dr. Pilcher, bearing in mind the fact that buckling of the posterior wall of the trachea does frequently occur, and for the purpose of obviating that process, he had, in his last two cases, operated with the Paquelin cautery. In one case he used the instrument and attempted to dispense with the tube, but the patient died because of other deposits of exudation upon the wound tract; the exudation did not occur in the larynx or trachea. He believed that it was important to remove the tube once or twice a day, in all cases, and examine the condition of the trachea. Such explorations of the trachea would frequently lead to the discovery of detached or partially detached products, that could be removed by curved forceps. Such forceps he regarded as almost indispensable to an ordinary tracheotomy case of instruments. His own method of using them, was to introduce the blades into the trachea without the tube, open them, and during the violent effort at coughing, almost certain to occur, quickly close them and withdraw the instrument. Certainly, with two or three attempts, the portions of detached membrane could be caught and withdrawn. Care, however, was necessary lest the bridge of mucous-membrane at the bifurcation of the trachea be seized and an attempt made to pull the whole bronchial apparatus from the patient.

Dr. Lange conceded to the early operation one advantage, namely, that it might save something of the strength of the patient; but he thought that it did nothing toward preventing the continuance of the disease, even though the operation was performed as low down as possible. In most cases the process has already extended downward to or below the point at which the opening in the trachea is made, as shown by the appearance of membrane at the time the operation was performed. He had operated in two cases quite early, where dyspnœa persisted after tracheotomy, and the main process was located below the tracheal opening. Both children died. He was unable to see how the fenestra could give rise to irritation so long as the internal tube was present.

Dr. Post remarked that when the operation was peformed upon adults, the fenestrated tube was important to allow speech.

Dr. Little said that, in his cases, when the non-

fenestrated tube was used, the patients had no difficulty in talking.

Dr. Post referred to one case in his own practice when there was œdema of the glottis, and it became necessary to perform tracheotomy, simple incision failing to afford relief, and the patient was unable to communicate with friends, except by means of the fenestrated tube.

Dr. Keyes referred to two cases in which he performed tracheotomy, to afford relief from stenosis of the larynx, due to syphilis. One patient was an adult, and wore a non-fenestrated tube three or four years.

The other case was that of a child, who wore out three or four silver non-fenestrated tubes, and she would always put her finger upon it when she wished to talk. Her syphilitic stenosis finally yielded to treatment, and she recovered entirely.

Dr. Little referred to the rapidity with which the opening closed when the tube was removed in his cases, when it was worn so long. In one case no air could be felt passing through the tracheal wound at the end of *two hours*. In one case, in which the tube had been worn three months, no air passed through the tracheal opening at the end of half an hour after the tube was removed. In the case in which the tube was worn for *one* year the opening closed in *three* hours so that air was not admitted. Dr. Little also stated that, out of thirty or forty cases of tracheotomy, he had had five recoveries, and in each one of the five cases no membrane was detected in the trachea at the time of the operation, nor was membrane expectorated after the operation.

In all the cases in which membrane was found in the trachea at the operation, or was expectorated from it afterward, the patients died.

In two of his successful cases the operation was performed when the patients were suffering from diphtheritic croup. In the other cases the children had symptoms of membranous croup, and in all the cases the operation was performed late.

EXTIRPATION OF THE UTERUS.

Dr. Lange narrated a case as follows: A patient, thirty-two years of age, had been suffering from sarcoma of the uterus for six or seven years, and had been operated upon a number of times by different surgeons. About three months ago he saw her in consultation with Dr. Hoeller, and operated upon her. He removed a considerable mass of soft substance, and cauterized the walls of the uterus; but four or five weeks later a new growth could be detected. The patient being willing, Dr. Lange then determined to extirpate the uterus. The operation was especially difficult, because of the extensive adhesion of the bladder to the uterus, and it became necessary to separate with the knife the union that existed over the entire anterior surface of the uterus, which had reached the size of the organ at the fourth or fifth month of pregnancy. During the entire operation one assistant held his finger in the bladder, as a guide to the knife upon the outside.

The uterus was adherent posteriorly, but not so firmly as to the bladder, and it was separated with less difficulty. The operation was performed by laparotomy, and drainage-tubes were introduced, as proposed by Bardenheuer, of Cologne; that is, a T-shaped drainage-tube from the vagina, and another one without lateral openings, parallel to the first, but a little above it. Through the second drainage-tube the injections were made. No sutures were applied, but below everything was left open. The abdominal incision was closed in the usual manner. The operation was very lengthy, and, at its close, the patient was very much exhausted. The reaction was not very great, and subsequently the progress of the case had been favorable for recovery. One attack of obstruction of the intestine occurred, which gave rise to pain, tympanites and rise of temperature, weak pulse, etc., and apparently peritoneal irritation; but under the constant use of ice-cloths externally, and opium with champagne internally, the symptoms subsided. The cystitis has improved, and there is scarcely any secretion from the vagina. The drainage-tube was removed on the fourth day. The first injections were of thymol, and caused severe pain, and the presence of the drain itself seemed to maintain the painful sensations.

Afterward the borated solution was used for injections, and it did not give rise to pain. The ovaries were not removed, because (1) they were imbedded in diffuse adhesions, and (2) because of the urgency, on account of the condition of the patient, to complete the operation. Silk ligatures were used. The soft parts left above the vagina seemed to have retained their vitality. The lateral portions of the vaginal portion were left, in order that the ligatures might have a firm hold. It was the ninth day after the operation, and there was fair prospect of recovery.

[February 14, 1882.—The patient is without fever; her general condition is good, and there is only a very small amount of suppuration from the vaginal portion. Dr. Lange regarded the patient as out of danger, yet deemed it advisable to keep her in bed for a short time longer.]

OMENTUM REMOVED FROM A CASE OF STRANGULATED HERNIA—OMENTAL HERNIA OF THE TUNICA VAGINALIS.

Dr. Jas. L. Little presented a specimen with the following history: It was removed from a patient, twenty-four years of age, who entered St. Luke's Hospital with a strangulated hernia and symptoms of peritonitis, from which he died twenty hours after the operation. At the operation it was found that the contents of the hernial sac consisted of omentum covered with a thick layer of lymph, as also was the testicle and spermatic cord. It was not deemed advisable to reduce the omentum, and, therefore, a strong ligature was applied and the portion presented cut off.

The case was interesting because it was one of *omental hernia of the tunica vaginalis*. It had been down twelve years, and had been reducible until strangulation occurred, and a truss had been worn a portion of the time.

Dr. Little asked for the opinion of the society with reference to the treatment of inflamed intestine in strangulated hernia. He had met with two cases in which the gut was covered with a thick layer of lymph, and had reduced it, but in both instances the symptoms of strangulation remained, and the patients died.

In one case, a strangulated femoral hernia, he believing gangrene of the intestine existed, opened the gut, and a free bleeding surface followed the incision; on closer examination he found that the surface of the gut was covered with a thick layer of lymph, the result of inflammation in the sac. The stricture was divided, and an artificial opening was left through which a portion of the fæces escaped for several weeks. This gradually closed, and the patient made a complete recovery.

Dr. Stimson said that several cases were reported in the *Archives Générales* about a year ago, in which the stricture was divided and the intestine, in the condition referred to by Dr. Little, simply drawn into the opening, left there without being opened, and good results were obtained.

The society then proceeded to the transaction of miscellaneous business.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 22, 1882.

Dr. E. C. Seguin, President, in the Chair.

OVARIAN TUMOR—DOUBLE OVARIOTOMY.

Dr. N. Bozeman presented a specimen which was interesting with reference to certain physical signs in the diagnosis of ovarian tumors. The patient, twenty-six years of age, tall and slender, presented herself for examination on February 9th, and gave the following history: She was married two years ago, and her first child was born in November, 1880. The labor was normal. A short time after her confinement a bloody discharge occurred which continued for six weeks, then subsided, but afterward recurred at intervals of two weeks, lasting for five or six days, and so went on until May, 1881, when a tumor was first noticed. From that time it grew rapidly, and attained an enormous size. On December 4, 1881, her family physician tapped it and drew off four gallons of fluid. When Dr. Bozeman first saw her the abdomen measured forty-five inches in circumference, and she was in good general condition—not suffering from pain, breathing was not difficult, and there were no special symptoms. The abdomen presented all the characteristics of unilocular cyst, and fluctuation was distinct throughout. The uterus measured three and a half inches, and was anteflexed. There was dulness over the left loin, indicating that the cyst originated in the left ovary. Ovariotomy was decided upon, and was performed February 17, in the usual manner. When the sac was reached, it was tapped and five or six gallons of fluid were removed. It was then found that adhesions were extensive, but especially in the right iliac and lumbar regions, and it was with considerable difficulty that they were broken up. It was soon discovered that the tumor had its origin in the right ovary, and that there was a solid portion which, with the sac, weighed ten or twelve pounds, and rested to the left of the spinal column, and gave rise to the dulness upon percussion, thus leading to the error in diagnosis with reference to the origin of the growth. The great size of the parent cyst explained the distinct fluctuation over the abdomen. The entire tumor weighed fifty-three pounds. The fixation of the uterus in the anteflexed position was explained by the extensive spreading out of a portion of the cyst and its adhesion in the utero-vesical pouch. The left ovary also contained a few small cysts, was about double the normal size, and it also was removed.

There was extensive hemorrhage from the parietes of the abdomen, which was arrested by the introduction of the quill suture, and allowing it to remain eighteen hours. There was considerable reaction, the temperature reaching 102½ F., and the pulse 120. By the application of the ice-coil to the abdomen, and the cap to the head, the temperature at the end of thirty-six hours was down to 99° F., the pulse to 100, and the subsequent progress of the case was satisfactory. Clinically, the case was interesting with reference to fluctuation, and dulness upon percussion over the left loin.

Dr. Henry J. Garrigues presented microscopic specimens and pencil sketches illustrating

ANATOMY AND HISTOLOGY OF A CYST OF THE PANCREAS,

removed from a living woman by Dr. N. Bozeman, December 2, 1881, and presented to the society December 14, 1881 (see Medical Record, vol. xxi., p. 46). The contribution appears in full on page of this number.

Dr. Geo. L. Peabody referred to a large cyst of the pancreas, presented to the society by Dr. Janeway.

In January, 1879, Dr. Peabody made an autopsy on the body of a man in which he found a large cyst of the pancreas that had ruptured. It had been supposed that the man died of internal hemorrhage. There was half a pailful of fluid in the peritoneal cavity containing brownish flakes. Dr. Peabody believed that it was a retention cyst, as a number of calculi were found, and the walls of it were made up of connective tissue, lined with cylindrical epithelium, the same as seen in Dr. Garrigues' specimen.

Dr. Bozeman said he had found the record of one case of pancreatic cyst in Gross' "Pathological Anatomy," published in 1845. The specimen was found in the body of a man at the military hospital at Cadiz. The cyst was about the size of a child's head, and contained fluid having a dark brownish color.

Dr. Newman, in behalf of Dr. Rodenstein, presented a specimen of

TUMOR OF THE BREAST,

removed from a patient fifty-one years of age, who had, two years before, fallen and struck her breast against a stone. Nothing was thought of the accident until six months ago, when she began to have sharp pains, and upon examination there was found a hard mass about the size of a walnut. The pains continued; the tumor increased in size, especially during the last two months, and it was evident that the entire gland was becoming rapidly involved. On January 1, 1882, Dr. Rodenstein, assisted by Drs. Ives and Newman, removed the entire gland, and all suspicious-looking tissues. On February 12th the case was doing well.

The specimen was referred to the Committee on Microscopy.

Dr. L. Peabody presented a heart which illustrated.

ANEURISM OF THE MITRAL VALVE,

It was removed from the body of a woman sixty years of age, who had been under observation two days in the Chambers Street Hospital. During that time she gave symptoms of chronic Bright's disease from which she died. Besides the kidney symptoms, she had a double mitral murmur, quite marked. The heart showed marked hypertrophy of the left ventricle, but there was not sufficient valvular lesion, apparently at least, to account for it, and it was doubtless due to the chronic diffuse nephritis, which was very evident by both naked eye and microscopical examination. The aneurism of the mitral valve was of small size, its opening was ovoidal in shape, the longest in horizontal, diameter being one-of an inch, and its shortest, or vertical, diameter being one-sixteenth of an inch, and the sac into which it led upon the lower surface of the anterior

segment would hold half of an average size green pea. The sac contained a small quantity of fluid blood. In the neighborhood of the aneurism were several patches of atheroma, and probably it originated in an atheromatous process. Besides, there were

RECENT VEGETATIONS UPON THE AORTIC VALVE,

but not sufficiently large, probably, to interfere with its function.

In the same case was found

A SMALL ERECTILE TUMOR UPON THE UPPER SURFACE OF THE LIVER.

The structure of the growth was demonstrated with microscopic specimens, and was distinctly cavernous, consisting of open spaces which were filled with blood and bounded by walls that contained a large number of cells of muscular fibre of the involuntary variety. Dr. Peabody regarded the growth as not an uncommon one upon the liver, as he had seen, probably, a dozen specimens within a year.

Dr. Gibney presented a specimen in behalf of a candidate, after which the society went into executive session.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting March 27, 1882.

Dr. F. R. Sturgis, President, in the Chair.

The Comitia Minora recommended the adoption of the following resolutions:

THE PLUMBING LAW.

Whereas, It is reported in the press that it is proposed to induce the present Legislature to amend Chapter 450 of the Laws of 1881, known as the Plumbing Law; and

Whereas, That law, during the short time it has been in force, has been of great benefit to this community; and

Whereas, The Board of Health, to whom has been intrusted the carrying out of the details for the enforcement of the measure, have acted with great moderation and discretion and to the satisfaction of those whose opinions are entitled to consideration; and

Whereas, The Board of Health have asked for no changes in the law at the present time;

Therefore be it Resolved, That, in the judgment of the County Medical Society, it would be unwise, at this session of the Legislature, to in any way amend the present law, which is one that has given great satisfaction and much needed protection to our citizens, and which has evoked the approval of the press of this country and Great Britain, and resulted in securing similar enactments in other communities.

SPECIAL HOSPITALS FOR SCARLET FEVER, MEASLES, AND DIPHTHERIA.

Whereas, No hospitals exist upon Manhattan Island proper, at which cases of scarlet fever, measles, and diphtheria are received for treatment, but such as are sick with these diseases have to be transported at present to Blackwell's Island, and in the future will be sent to North Brothers Island, if they, for any reason, cannot be accommodated where they reside, such a journey to those sick with the above-mentioned diseases being dangerous to the life and health of the invalid;

Therefore be it Resolved, 1. That it is the imperative duty of the proper authorities to set apart from the lands belonging to the city an appropriate place for the erection of a hospital or hospitals for persons sick with scarlet fever, measles, and diphtheria.

2. That this society memorialize the Legislature to direct the Commissioners of the Sinking Fund of the City of New York to transfer to the care of the Board of Health of said city such lands situated on the river front of the East River as shall be declared by resolution of the Board of Health of said city a proper and suitable place for such hospitals, providing that the same shall be first approved in writing by the Mayor of said city.

3. That the proper authorities should appropriate sufficient funds for the erection and maintenance of such hospital or hospitals.

4. That the President of the Society, Dr. A. Jacobi, and the Chairman of the Committee on Hygiene, be appointed a committee to urge on the parties before mentioned the speedy execution of this undertaking.

Signed by Drs. E. G. Janeway, D. B. St. John Roosa, Stephen Smith, Richard H. Derby, and Francis M. Weld.

Dr. Chas. F. Stillman then read a paper on

OBLIQUITY OF THE PELVIS AND ITS TREATMENT.

(See p. 337.)

The paper being before the society, Dr. Lewis A. Sayre said that he had always thought the deformity was not the disease, but simply the sequel of some disease, and that sacro-lumbar curvature did not exist except as the result of some disease or abnormal condition.

Dr. Stillman said that he spoke of it as an independent condition only in the same sense as club-foot or lateral-rotary curvature of the spine were regarded as diseases.

Dr. Sayre thought that the curvature was the result of some other defect or disease, and when that disease or defect was cured or corrected, the deformity—curvature if that be the deformity—took care of itself substantially. He thought it was hardly proper, with that view of the subject, to name sacro-lumbar curvature as a separate, distinct affection, and suggested a serious consideration of the proposed nomenclature before it was urged for adoption.

The lateral curvature of the spine was very commonly the result of inequality in the length of the limbs, and by equalizing them the curvature was at once corrected. In the same way he would regard sacro-lumbar curvature, and would not regard it as a deformity except as the result of some antecedent condition or disease. Again, concerning the deformity associated with hip-disease, he regarded it as the result of contraction of the soft parts during the inflammatory stage. Distortion of the pelvis followed, which could not be relieved except by making extension in the *direction of the deformity*, and any mode of making extension without observing that principle he regarded as bad practice. It was not the kind of splint, but the principle involved in the application of the extending force, in order to get the limbs into the proper position. The photograph presented by Dr. Stillman illustrated how imprudently a thick-soled shoe could be applied, injudiciously increasing the deformity. Any person could produce the amount of distortion of the pelvis exhibited by raising the sole of the foot. That distortion took place at the sacro-lumbar junction was

apparent, but unless connected with some inequality of the limbs, some inflammatory action producing abnormal muscular contraction, he doubted its existence, and if the disease or defect upon which it depended could be cured or overcome, the deformity would correct itself.

Dr. M. Josiah Roberts had been much pleased with the mechanical ingenuity displayed in Dr. Stillman's apparatus; but at the same time he thought that the instrument placed upon the boy was faulty in carrying out the idea for which it was intended. He thought that both of the zones or girdles which encircled the body were rather narrow, especially the pelvic, and made pressure upon too small a surface. In order to get a firm basis upon which to exert mechanical force, it seemed to be requisite to have a much larger zone, one covering a greater portion of the hips and gluteal muscles. The extension appeared to be all that could be desired, except that if elastic tension were incorporated it would certainly improve the instrument.

Dr. Roberts then illustrated upon the blackboard the manner in which elastic tension could be applied for the correction of sacro-lumbar curvature and the tilting of the trunk manifested in certain cases of lateral rotary curvature after the plaster-of-Paris jacket was applied as accurately as possible. As soon as the apparatus was removed, in certain cases, the weakness of the lower dorsal muscles was such as to allow the body to tilt to one side, and still again in some cases there was an unusual amount of projection of the abdomen. These tendencies could be readily overcome by inserting into the jacket, while it was being applied, strips of perforated tin to which small rings had been soldered, and through these rings an elastic cord, of the size of a lead pencil, perhaps, could be passed, and it would exert sufficient traction to overcome the tendency to the perpetuation of the deformity on account of weakness of the muscles. For example, the tendency of the trunk to tilt to the right, looking upon the back, could be overcome by inserting a ring at the upper right-hand corner posteriorly, another at the lower left-hand corner over the pelvis, and through these pass the elastic cord and extend it down the thigh and leg and secure it at some point on the outside of the leg low down. The amount of traction required was not very much, the weight of the apparatus added did not exceed two or three ounces, and the results according to his observation had been very satisfactory. The same principle could be applied to the other cases mentioned.

Dr. James S. Green, upon invitation, remarked that he had often noticed certain conditions left after the cure of hip disease, angular and rotary lateral curvature of the spine, which no apparatus he had ever been able to use had corrected; and therefore he had not regarded the cases as completely cured, because there remained certain conditions due to the fact that the muscular contraction upon the opposite side had not been overcome. The cases which Dr. Stillman had presented to the society had been under his own observation also, and he had been much interested in their study. The question of obliquity of the pelvis, and its relation to the parallelism of the shoulders, was a question which had not heretofore been presented to the profession, and he regarded it as one worthy of careful consideration.

Dr. Stillman said it was with hesitation that he had brought the subject before the profession, and yet it had seemed to him to be proper, because there had been so little said concerning the sacro-lumbar curvature. The lateral rotary curvature was essentially a secondary condition, and occurred *without* limp. The sacro-lumbar curvature was always accompanied by limp. If the latter was not to be treated as a primary affection, neither should the former be. The equality of the pelvis and shoulders must be maintained, and if the muscles did not do it, an instrument should be applied to assist them; and if muscular contraction did not exist, artificial muscles should be applied to make up for the deficiency.

With reference to Dr. Roberts' elastic cord, Dr. Stillman thought its tendency was to make undue traction upon each joint over which it passed, as the knee and hip, and in that way it might do permanent injury to the articulations. To effectually relieve deformity, whether in the back or a joint, he believed it to be necessary to make local extension. This was secured by the plaster jacket, but if the same end could be secured, and at the same time the motions of the back not hindered at all, he regarded it as decidedly the preferable method of treatment.

The Secretary announced the death of Dr. John Osborn, in the sixty-fourth year of his age.

The President announced the hour of the funeral, and invited the members of the society to attend.

The society then adjourned.

Correspondence.

THE WHITE LINE IN THE FISSURE OF THE CORTEX CALCARINA.

To the Editor of The Medical Record.

Sir: Dr. Dalton, in describing as novel and not previously noticed the distinctness of the "white line" in the cortex of the *fissura calcarina*,* must have been unaware of the fact, that not alone this feature, but others, which he does not refer to and evidently does not recognize, are to be found detailed and figured in several text-books published ten years ago. The extent of the peculiar appearance in question is more accurately described in Henle's work on anatomy (iii., 2, p. 276, edition of 1871) than in the report of Dr. Dalton's communication; and in Stricker's text-book on histology (p. 710, edition of 1872) the minute anatomy, the comparative morphology, and the extent of this white streak are described with an accuracy leaving little to be desired. It may not be uninteresting to note that Meynert, over ten years ago, surmised that the visual area of the cortex corresponded somewhat to the extent of this white line, and that the white line is really double, each division containing a special kind of cortical pyramidal cells, known as the "solitary cells."

Edward C. Spitzka, M.D.

Woman's Medical College.—The twelfth annual commencement of the Woman's Medical College of Chicago was held February 28th. The degree of Doctor of Medicine was conferred upon twenty-three graduates.

* I presume that this was intended by the "fissure of calcarini" in the report.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 19, 1882, to March 25, 1882.

ALEXANDER, R. H., Major and Surgeon, having reported at these headquarters, will report to the Commanding Officer District of New Mexico, Santa Fé, for duty as Attending Surgeon at District Headquarters, and Post Surgeon, Fort Marcy, New Mexico. S. O. 59, Department of the Missouri, March 20, 1882.

TREMAINE, W. S., Captain and Assistant-Surgeon. Assigned to duty at Fort Porter, N.Y. S. O. 51, Department of the East, March 24, 1882.

DICKSON, J. M., Captain and Assistant-Surgeon. Assigned to duty at Fort Adams, R. I. S. O. 51, Department of the East, C. S.

TAYLOR, B. D., Captain and Assistant-Surgeon. Granted leave of absence for twenty days, to take effect on arrival at Fort Ringgold, Tex., of a medical officer from Fort Brown, Tex. S. O. 26, Department of Texas, March 16, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 25, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 18, 1882.	8	9	242	2	166	110	26	0
March 25, 1882.	6	4	234	4	134	92	31	0

THE MIAMI MEDICAL COLLEGE, Cincinnati, O., held its twenty-second annual commencement on March 9th. Forty-one students were graduated.

SPECIFICS FOR BRIGHT'S DISEASE.— Dr. S. Neumann, of Vienna, recently reviewed some of the later therapentical measures recommended for Bright's disease. He concludes by saying, as did Liebermeister some years ago: "The more complete becomes our knowledge of Bright's disease, the more certain is it established that there is no specific remedy or measure for it." Bright announced essentially the same thing in his early descriptions of the disease.

It may be considered, therefore, one of the few certainties of medicine that the disease is incurable, except in its very early stages. Yet our religious journals say it is all right for them to announce cures and curers of this disease to their readers.

THE VALUE OF "CREDE'S METHOD" of expelling the placenta has recently been tested by comparative experiments. Fehling, of Stuttgart, used Crede's method in a series of ninety cases. The placenta was left to come away itself in ninety-five cases. The following were the results:

In the first series (Crede's method) the average loss of blood for each patient was 169 grammes (ʒ vss.). The time before the placenta came away averaged 7.7 minutes. In the second series the average loss of blood was 235 grammes (ʒ vij. ℈ss). The time before expulsion was 13.4 minutes. In eighty-five of the ninety cases treated by Crede's method the membranes came away entire. In ninety-one of ninety-five cases left alone the membranes came away entire.

SANITARY CONVENTIONS are becoming popular in the West. One will be held at Greenville, Mich., on Tuesday and Wednesday, April 11 and 12, under the auspices of the State Board of Health. Addresses on subjects pertaining to public health will be delivered at the sessions of the convention, followed by general discussion of the subjects treated. Among the subjects proposed for discussion are the following:

"The Prevention and Restriction of Small-pox, Diphtheria, and Scarlet Fever;" "The Disposing of Decomposing Organic Matter;" "Pure Air: Why we should Have It and How we shall Get It;" "School of Hygiene;" "The Relation of the Newspaper Press to Sanitary Reform."

An exhibition of sanitary apparatus is also provided for, and invitations have been extended to manufacturers and dealers in articles conducive to health, to forward samples of their wares for exhibition at the convention.

WILLIAM T. SMITH, M.D., son of the late President Smith, has been appointed Lecturer on Anatomy and Physiology in Dartmouth Medical College.

POISONING FROM CANNED FOOD.—At a recent meeting of the Chicago Medical Society, Dr. S. I. Avery reported several cases of poisoning in a family from eating of canned sardines. Dr. Bartlett reported similar cases from eating pressed corned beef. Dr. Tilley reported cases of poisoning from eating bluefish. Dr. W. H. Curtis attributed the poisoning in such cases to the presence of a peculiar ferment in the food eaten. Dr. Ingals considered that the fault might lie with the food before canning.—*Chicago Medical Review.*

DR. DAVID KING, an eminent physician, of Rhode Island, died at his home in Newport on the 7th ult. He belonged to one of the distinguished colonial families of New England. He was born in 1812, and graduated at Brown University and Jefferson Medical College. He was successively Vice-President, President, and Censor of the Rhode Island State Medical Society, and member of, and delegate to, the American Medical Association; he was also President of the Newport Historical Society from 1853 to the time of his death. His literary and historical tastes led him to collect a rare and valuable library of many thousand volumes, much of the same character as the remarkable library of the late Mr. Brinley.

THE TURKISH BATH for the treatment of horses is a novelty lately introduced by a veterinarian of this city.

DR. JUNOD, of Junod's Boot fame, died February 25, 1882.

DR. THEODORE SCHWANN, the discoverer of the cell as the basis of animal tissue, died recently.

DR. D. A. WISE has been appointed Superintendent of the Asylum for the Insane, Williamsburg, Va.

RUSH MEDICAL COLLEGE.—The thirty-ninth annual commencement of this college was held in Chicago February 21st. Dr. J. Adams Allen, Presi-

dent of the college, conferred the degree of Doctor in Medicine to one hundred and seventy-nine graduates. Honorary degrees were conferred upon Dr. J. Milner Fothergill, of London, England, and Prof. Giovanni Paladino, of Naples, Italy. Ad eundem degrees were conferred upon Drs. I. N. Danforth and J. S. Knox.

Dr. C. R. Carpenter delivered the valedictory for the class. Dr. De Laskie Miller made the address on the part of the faculty.

The Missouri Medical College Clinical Amphitheatre, in the city of St. Louis, recently erected at a cost of about fourteen thousand dollars, is modestly stated by our Western brethren to be the finest amphitheatre of the kind in the world. The room is 55 feet square, with a skylight 16 x 20 feet—thus giving perfect illumination. Commodious tiers of seats, with high backs—thus preventing the putting of feet upon them—capable of seating four hundred or more, are well arranged.

Iodoform externally applied, in cases of children, is said to produce, sometimes, great mental disturbance and even temporary insanity.

Ex-Presidents' Prize of the Medical Society of Virginia.—The ex-presidents of the above society, have decided to offer annually, a prize for the best essay on some selected medical subject, and a prize for the best essay on some selected surgical subject. Each prize this year will be a gold medal, of fifty dollars in value, or its equivalent in money. Prizes are open for competition to all members of the society. The subject of the medical essay this year will be: "Alcohol, its Use and Effects as a Beverage and Medicine." The subject for the surgical essay this year will be: "Recent Progress in Abdominal Surgery."

Morphia and Codeia.—The following conclusions of Dr. J. B. Garrison regarding morphia and codeia are, we think, much too favorable toward the latter. Pure codeia often fails to relieve pain satisfactorily. It is very probable that codeia of the shops often contains much morphine with it. We give Dr. Garrison's views as published in the *Western Medical Reporter*:

First.—Codeia is a greater cardiac stimulant, as indicated by the force and volume of the pulse.

Second.—It is a more powerful diffusible stimulant, elevating the temperature and exciting the capillaries. Large doses produce intense itching with an erythematous redness of the skin, thereby indicating its use in all internal congestions, save, perhaps, those of cerebral or spinal origin.

Third.—It does not check the secretions to such an extent as morphia; it is therefore indicated when it is desired to avoid locking up the liver, constipating the bowels, or lessening expectoration.

Fourth.—It is greatly less dangerous than morphia, no lethal dose having been recorded; yet so potent an agent should necessarily be exhibited with due caution. Its comparative safety recommends its use in infantile therapeutics where morphia is so rarely tolerated.

Fifth.—It is *never* followed by the *intense* nausea which so often contra-indicates the use of morphia; and frequently no unpleasant after-effects are noticed, referable to its exhibition.

Sixth.—There is less danger of the induction of the *opium habit* from repeated doses than is the case with morphia, which should be a matter of serious consideration in making a choice between the two.

Dentistry as a Specialty.—At a recent banquet of the Chicago Dental Society some interesting remarks concerning the present and future of dental surgery were tendered by W. W. Allport, M.D., D.D.S. After alluding to the early efforts of Dr. Harris and others to establish a chair of oral surgery in some of our medical colleges, and the final establishment of our first dental college in Baltimore, the speaker called attention to the present facilities for dental education in this country. Dr. Allport holds that a general medical education is as necessary as a foundation in dentistry as in ophthalmology, gynecology, or any other department of operative medical science, and thinks that at no distant day such a foundation will be required; and in this we heartily agree with him.

The Illustrated Quarterly of Medicine and Surgery, edited by George Henry Fox, Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, and Frederick R. Sturgis, Professor of Venereal Diseases, Medical Department, University of the City of New York, is a new candidate for professional favor.

Each number of the *Quarterly* will consist of four quarto plates, printed on fine quality of cardboard, 10 x 12 inches, with twenty-four or more quarto pages of accompanying text, printed on superfine paper. The text will contain descriptions of the cases represented by the plates, and other papers, illustrated, when necessary, by means of wood engravings.

The first number, which is a model of its sort, contains elegantly illustrated articles by Dr. A. C. Post, Willard Parker, J. L. Little, T. G. Thomas, F. H. Bosworth, Samuel Sexton, and T. R. Pooley. E. B. Treat of this city is the publisher. The general make-up of the journal is in the form and on the plan of the photographic illustrations of skin diseases, which proved itself so deservedly popular with the profession. We wish it abundant success. The subscription price is eight dollars a year; single numbers, two dollars.

Attempt to Shoot an Asylum Superintendent.—On the afternoon of the 16th ult., an insane man stepped into the doorway of the private office of Dr. John P. Gray, of the State Lunatic Asylum, and fired at him. Chaplain Gibson, Dr. Blumer, and John Gray, son of Dr. Gray, were present at the time. The bullet (38 calibre) entered Dr. Gray's face just six-eighths of an inch below the outer angle of the left eye, passed five and three-eighths inches through the face, back of the nose and out through the right cheek, two and one-eighth inches below the outer angle of the right eye and one inch back of a vertical line drawn from that point and from thence into the window-casing, about five feet from where the doctor sat. Dr. Gray was able to walk to his room and bathe his face. No shock followed. The assailant gave himself up. He was not an inmate of the asylum, but had been employed at the Turkish-bath rooms in the city. For the past eighteen months he has labored under the delusion that he was an ambassador sent from heaven to shoot Dr. Gray. After the shooting he went home and told his friends that he had shot Dr. Gray and would give himself up. He went to the jail and unloaded a perfect arsenal. He was afterward taken to the station-house, and said that he had had a duty to perform and had done it. We are glad to learn that Dr. Gray is doing well, with every prospect of ultimate recovery.

An Act to Regulate the Practice of Medicine is before the Legislature of Virginia.

Philadelphia Medical Charities.—John D. Lankenau, who is about having finished, at his own expense, a wing, costing $60,000, to the German Hospital, is soon to erect a Home for Aged Couples, to cost $40,000, on the addition to the hospital grounds which he bought some time ago for $10,000.

Female Medical Graduates.—Nineteen students were graduated at the Women's Medical College, in Philadelphia March 16. Five of the ladies were from Pennsylvania, three each from Massachusetts and Ohio, two each from Maine and Indiana, one from New York, and one each from Denmark, the Hawaiian Islands, and Burmah.

The Marine Hospital Service has decided to extend its usefulness to Portland, Oregon, and Assistant-Surgeon Charles E. Banks has been ordered from San Francisco to Portland to assume charge of the service there.

Surgeon H. W. Austin, of the Marine Hospital Service, has been ordered from Washington to Cincinnati, relieving Surgeon Walter Wyman, who has been ordered to Baltimore.

College Examinations for the Degree of Doctorate.—Dr. J. G. Meachem, of Racine, Wis., thinks that independent examining boards for graduates are not needed, and that the medical faculties of the several leading colleges are the best judges of the qualifications of candidates.

Locomotives vs. Malaria.—Dr. Z. T. Dellenbaugh, of Cleveland, Ohio, writes: "In The Medical Record for February 28, 1882, page 199, I note Surgeon William S. King's letter on 'Locomotives and their Influence on Malaria.' The late Colonel Thomas A. Scott repeatedly called the attention of my preceptor, Professor Joseph Pancoast, to this very subject several years ago, and cited the self-evident infrequency of malarial affections along the line of the Pennsylvania Central Railroad in particular, as compared with the condition existing when first built and shortly afterward.

"When Professor Pancoast informed me of the views advanced by Colonel Scott, I maintained that it was not due so much to the presence of the road and running trains as to the better drainage, increased cultivation, etc., of the adjacent farms. The proximity of a railroad in rural districts enhances the value of the land, it being customary to drain and cultivate high-priced, better than low-priced, lands. At the same time it is an undonbted fact that locomotives radiating heat and fast-moving trains will produce considerable upward as well as side current, but in itself would scarcely affect a space beyond the company's way-right. Colonel Scott attributed much of this salubrious effect to the products of the enormous amount of coal consumed along the line of the road, emitting carbon in the form of soot, sulphur, sulphurous and sulphuric acid and other antizymotic gases."

Large Bequests to Medical Charities.—The medical and other charities of this city recently received some very handsome bequests from the late Miss Sarah Burr, who died March 1st, worth about $3,000,000. $200,000 is given for the establishment of a new Dispensary (of which there is no especial need at present). This is to be called the Good Samaritan Dispensary. $30,000 is given for the maintenance of ten free beds in St. Luke's Hospital and the same sum for a like purpose is given to the Woman's Hospital. The Northeastern Dispensary, Home for Consumptives, Home for Incurables, Society for the Relief of the Ruptured and Crippled, Nursery and Child's Hospital, New York Infant Asylum, German Hospital, Mount Sinai Hospital, St. Mary's Hospital for Children, Hahnemann Hospital, Asylum for Lying-in Women, St. John's Guild Floating Hospital, the Training School for Nurses, get each $10,000. The Ophthalmic Hospital, Ophthalmic and Aural Institute, Northern, Demilt, and Harlem Dispensaries, Harlem Hospital and Dispensary for Women and Children, Northwestern, Eastern, and West Side German Dispensaries, Western Dispensary for Women and Children, and Manhattan Eye and Ear Hospital get each $5,000.

It will be seen that very few charities are forgotten. St. Luke's, The Woman's Hospital, and the Northeastern Dispensary, will get the largest sums. The money is all to be paid within two years. The total amount given to the medical charities alone is nearly half a million.

Transactions of International Medical Congress.—The transactions of the recent International Medical Congress, last August, have made their appearance with a promptness which does great credit to the executive committee. It is stated in the preface that the four royal octavo volumes contain 2,552 pages, 180 illustrations, 450 communications, printed in the language selected by each author, and reports of 858 speeches.

Volume I. (648 pages) contains the account of the general meetings, the general addresses, the lists of members and committees, and the rules, together with the reports of the work done in the museum, and in the sections of anatomy, physiology, pathology, and materia medica.

Volume II. (616 pages) contains reports of the sections of medicine, surgery, and military medicine.

Volume III. (680 pages), contains reports of the sections of ophthalmology, diseases of the throat, skin, ear, and teeth, and mental disease.

Volume IV. (608 pages), contains reports of the sections of diseases of children, obstetric medicine and surgery, and state medicine.

Mr. J. W. Klockmann, No. 2 Langham Place, London, W., the publisher, is, we understand, prepared to supply paper-bound sets to members upon the receipt of five shillings for postage. The price to non-members is ten shillings and sixpence each, or two pounds two shillings for the set in paper covers.

As we have previously noticed, the secretaries of some of the sections are prepared to supply the reports of those sections separate from the rest of the Transactions.

The American Journal of Neurology and Psychiatry, the first number of which is out, presents an excellent appearance. An especially interesting feature is the editorial notes and comments. The journal is also to have a department devoted especially to the needs of the general practitioner.

Prizes at Commencement of the American Veterinary College.—At the recent commencement of the American Veterinary College, the following prizes were awarded by Professor A. W. Stein, M.D.: A gold medal, given by the Board of Trustees, for the best general examination, to Samuel James Kemp, Jr., D.V.S., of New York; a set of

standard medical books, by the Alumni Association, for the second best general examination, to Lester H. Howard, D.V.S., of Massachusetts; a gold medal, given by New York State Veterinary Society, for the best practical examination, was given to Samuel James Kemp, Jr., of New York. The anatomical prize, to the junior class, was awarded to W. Bertram Noyes, of Boston, Mass.

Southern Medical Commencements.—The Medical College of South Carolina held its annual commencement March 2, 1882. Degrees were conferred upon twenty graduates. Drs. E. Wasdin, J. E. Berley, and A. D. Williams, received the prizes. The Dean read a report, in which we are glad to see it announced that the college has adopted a three years' graded course. It is at present optional, but will be made imperative soon.

The commencement of the medical department of the University of Georgia, at Augusta, took place on February 28th. The degree of M.D. was conferred upon twenty-three candidates.

The Medical College of Indiana held its annual commencement March 1st. The graduating class numbered fifty-nine.

The Albany Medical College held its annual commencement on March 1st. Degrees were conferred upon fifty-four graduates. The address was delivered by Dr. S. O. Vander Poel, and contained much excellent advice. The annual banquet took place in the evening, and it was largely attended and very successful.

The Central College of Physicians and Surgeons, Indianapolis, Ind., held its annual commencement February 28th, at which degrees were conferred on eight students, several being women. The annual address was delivered by Prof. A. W. Brayton, and we have rarely read so frank and intelligent a discussion of the question of "the higher medical education" as he presented. Speaking of the surplus of physicians, he said: "This excess of doctors is due to four causes: First, too many colleges; second, no gradation of courses, the second year's work being repeated to the same classes; third, lack of entrance examinations, and fourth, and worst of all, the granting of degrees by medical faculties having a financial interest in the college and the success of the graduates. In this city there are five, in Fort Wayne two, in Evansville one, in all eight medical colleges graduating in Indiana this week 180 students, while Chicago confers, through her eight colleges, 580 degrees, and Cincinnati, Louisville, and St. Louis, as many more. Over a thousand doctors this week, all graduated within a radius of two hundred miles." He refers to the American peculiarity of being doctored, as follows: "Foreigners do not call a physician for every ailment. Our people have ready money, spend it freely, and are the most 'doctored' people on earth."

Many Parisian Druggists have connections by telephone with the large hotels and physicians' offices. In this way prescriptions and messages are telephoned.

Academy of Sciences.—The New York Academy of Sciences, at its recent annual meeting, elected the following officers for the ensuing year: Prof. J. S. Newbury, President; Prof. B. N. Martin, Vice-President; A. R. Leeds, Corresponding Secretary; O. P. Hubbard, Recording Secretary; J. H. Hinton, Treasurer; Dr. Louis Elberg, Librarian; Prof. D. S. Martin, G. N. Lawrence, Thomas Eggleston, Prof. Trowbridge, Drs. A. C. Post and Louis Elberg, Councillors; and B. G. Amend, B. B. Chamberlain, C. F. Cox, Prof. H. L. Fairchild, and W. H. Leggett, Curators.

Advancing the Standard.—"Trustee" writes: "In a 'leader' in The Medical Record of March 11th, speaking of advancing the standard of medical education you say, 'the three medical schools of this city are about on a par regarding standards for graduation, etc.' At the moment you had forgotten, no doubt, that the regular curriculum of the College of Physicians and Surgeons has *two months* longer course of *compulsory* instruction annually than the other schools, the spring courses of the other schools not being essential to graduation. This statement is not made in any spirit of criticism, but only in the interest of the 'advancing standard' of which you speak."

Dermatolysis—Fibroma Pendulum.—At the University Medical College, March 28, 1882, Dr. H. G. Piffard, Professor of Dermatology, presented a unique illustration of "dermatolysis" in the person of Herr Haag, the so-called "India-Rubber Man," or the man with an elastic skin. In comparison, a man who had a fibroma pendulum of the scalp, was exhibited, the disease consisting of hypertrophy of the white connective tissue of the skin. In this instance the integument has no more than the normal amount of elasticity. This condition has, by some, been called dermatolysis, but when compared with the case of Herr Haag, it was readily seen that the fibroma pendulum is not a true dermatolysis, or loosening of the skin.

Two hundred and twenty-five years ago a case of loosening of the skin, or true dermatolysis, existed, and has been described by Makron (?), who says that "in 1657 a Spaniard, twenty-five years of age, presented himself to our hospital, who could grasp the skin of the right breast, or shoulders, and stretch it out until it covered his mouth, and a like elasticity existed in other parts of the body." The skin of Herr Haag has the normal appearance, except that the small veins show much more distinctly than normal. He has always been aware that his skin was looser than that of other persons, and noticed it when compared with the skin of other boys. When drafted for military service in his native country, the surgeon in examining him noticed, to his surprise, that the skin could be stretched out in broad folds, and on account of this abnormality regarded him as entitled to exemption from doing military duty, and he was discharged. While under the observation of dermatologists in Vienna, a section of skin was removed from the anterior aspect of the right arm, for microscopical examination, and the report was that there was no change in the skin itself, but there was a decided absence of the subcutaneous fat and cellular tissue, which permitted the skin to slide and be stretched over the body. At any part of the body the skin did not stretch to a very great extent longitudinally, but transversely or laterally it could be drawn out to five or six, or more times the normal distance, and as soon as the traction was removed it returned to the normal position and appearance.

By the aid of a calcium light, arranged by Dr. M. N. Miller, and a prism, Prof. Piffard was able to ascertain the spectrum of the blood in the human circulation, and it was demonstrated that it yielded the ordinary *double* absorption bands of oxy-hemoglobin, and not the spectrum of reduced hemoglobin.

Original Communications.

SUSPICIOUS ORGANISMS IN CROTON-WATER.

By EPHRAIM CUTTER, A.M., M.D.,
PRINCIPAL AM. INST. MICROLOGY MED. DEPT., NEW YORK: MEMBER PHILOSOPHICAL SOCIETY, GREAT BRITAIN, ETC.

The experience of a medical man deals with almost all branches of natural science and instruments of precision. This is well shown in the medical examination of hydrant drinking-waters, to determine their potability. Mineralogy tells that water is a *mineral* (rather hard on those who believe all minerals to be poisons); chemistry tells of the organic impurities ascertained by its determination; and now morphology (or the science of forms) tells of the forms found in the water, whether organic or mineral. Botany tells of the plants and plant-tissues, zoölogy of the animals and animal tissues and organs. So that while the medical man may not be a botanist, chemist, zoölogist, or mineralogist, still his judgment of water is based on what evidence is presented by these divisions of natural science outside his own field. The chemical investigations of water are of great value and cannot be disregarded. Still chemists themselves confess their inability to reveal the whole truth of the suspicious organisms in hydrant-water, for the reason that while they can give the amount of organic impurity, they cannot tell its classification or characters, which botany and zoölogy alone can give.

For example, tell a chemist to analyze the objects found in a city street; he would burn them to ash, and give you the elements found in the ash; but any one could do better than this, for inspection reveals at once the presence of human beings, cars, carriages, horses, etc. So when hydrant-water is examined under the microscope there is found such a large variety of species of plants and animals, that when a microscopist is asked an opinion as to the potability of the water, he is quite at a loss. For example, a late examination of one or two specimens of Croton drawn from a bath-tub faucet to the amount of thirty or forty gallons in all, if all diatoms were included, would count up over one hundred recognizable forms, saying nothing of those not recognized.

Not that Croton is more full than many others, for the writer has studied over thirty different water supplies, from Dover, N. H., to Chicago, Ill., and Richmond, Va., and Croton stands well among all of them. (See Appendix A, and compare with Appendix B, water from the Plum Spring, Mantua, O.)

In order to show the train of thought developed by such studies, it will be the scope of this paper to say something about the organisms found that are suspicious.

These are figured in the cut from life by Dr. Cuzner, of Peekskill. The writer selected and made the mounts whence they were drawn, 450 diameters.

Understand they are referred to as *suspicious*, and as *possibly nocent*. What is said must be taken in a suggestive, rather than in a didactic manner, with such practical remarks as may occur in passing.

A. *Epithelia.*—These are very common in all hydrant drinking-waters, but not so abundant in well-waters. Those in the cut were thought to be human, though they might have come from some other animal. Note the little oblong dots by the side of the place of nucleus: these dots constitute a parasitic vegetation, such as are seen in the epithelium of consumptives (O., Fig. 1), cases of typhoid fever, scarlatina, diphtheria (*vide* the elegant drawings of Salisbury's monograph on diphtheria soon to be published by *Gaillard's Journal*).

Now, these epithelia have a resistance to decay like hair, and it is wonderful that they do not perish sooner when exposed in water. They must travel in the air, on the wings of winds, as they are abundantly found in the central upper surface water of lakes far removed from sources of pollution. It is suspected that epithelia of small-pox, or typhoid fever, or measles, or diphtheria may communicate these diseases. Certainly it has been a far more profitable subject of thought to the writer than topics that generally agitate medical societies. It seems as if the soil of the human habitat must be prepared by a lessening of vitality or softening of

Fig. 1.—Organisms in Croton. Drawn from life.

the resistance to vegetation, just as farmers plough, harrow, and manure their soil—adapting their processes to the different crops to be sown and raised. In other words, if the human system is in splendid order, no doubt it will resist the communication of most disease vegetations by epithelia. Are all drinkers of Croton in splendid condition?

Bacteria.—The group marked B, Fig. 1, and dots inside A, are microscopical objects of minutest form and simplicity of structure. They are protoplasmic, or bioplasmic, automobile, capable of arranging themselves into varied forms and shapes, and reproducing themselves by division into countless hosts. There are differences of opinion in relation to the exact nature of bacteria. Perhaps the larger moiety of those who have studied them regard them as ultimate forms of life—like the desmids, for example. But there are others, the writer among them, who regard them merely as *embryonal* forms of algæ or fungi, capable of development in their embryonal state, and only developing into the mature or perfect forms when the proper conditions are given. What these conditions are in all cases cannot be told, but the proper conditions in the so-called bacteria or micrococci of diphtheria are beautifully shown in the paper alluded to above. By simply exposing the secretion and membrane from a diphtheritic patient in a well-corked, large-mouthed vial, two-thirds filled with air, the full forms of the micrococci are seen to be a fungus of the mucor species,

like that found in dung-rot. It is not said that *none* of these so-called bacteria are the ultimate form of development, but that a great many of them are not, and that great obscurity and confusion in ultimate medical researches have been brought about by regarding bacteria as ultimate forms of vegetable life. This cannot be discussed here at length.

Now, what are the mature forms of vegetation to which the embryonal forms shown in the cut belong? It is not possible to tell unless they are separated and cultivated. They may be the spores of algæ or fungi, desmids, gemiasmas, polycocci, yeast, leptothrix, etc. The only way to tell them is by culture. The thing that is suspicious about them is that they are almost identical with the vegetations that have been found in connection with ague, typhoid fever, measles, erysipelas, diphtheria, etc. Here lies the suspicion, and here is a large field of study for the coming race of medical men.

These suspicions are heightened when it is remembered that the so-called bacteria swarm about dead animals, or animal matter found in water. Some of these must be regarded as the embryonal forms of fermentative vegetations, which are often putrefactive.

Are these unpotable? Common sense says so.

No one voluntarily drinks fetid water if possible to avoid it; still there are exceptions. A few years ago a committee of Boston city government inspected the pollutions of the Mystic water-supply. Russell Brook was visited in company with some of the tanners who had polluted the stream. One of the latter, to prove the innocent character of the foul, fetid, ash-colored waters, drank a goblet of the water taken from the brook before the committee, and because he was not made sick, adduced his history as a triumphant proof of the innocent character of the supposed pollution! This water, the writer afterward found, swarmed with bacteria, just like those described. Still the committee were not satisfied, as they reported in favor of a sewer, through which the filth from the watershed of Russell brook now flows! As well might a man shot at with a bullet, and escaping untouched, say that bullets were not instruments of death! The point to be considered is whether the continuous use of water polluted by the embryonal forms of vegetable life (bacteria) may not produce disease in the varied classes and conditions who use a city water-supply.

D, K, *saprolegnias*, are two figures of saprolegnia found in Croton water. Like such are also found growing parasitically on the bodies of dead flies lying in water, fish, frogs, and, in some cases, on decaying plants. To the naked eye they appear like colorless, minutely filamentous tufts adherent to such objects, forming a kind of gelatinous cloud, more or less enveloping them. Under the microscope the tufts are seen to consist of long, colorless, tubular filaments, spreading out in all directions, with or without branches.

In the figure the tubes expand at one end, and narrow down to the other. The sporangia are at the large end, as seen in the cuts. The tubes are double outlined—made blue by iodine and sulphuric acid—hence cellulose, containing a colorless, slightly granular protoplasm. Nees calls them Achyla, and there is considerable confusion among naturalists about them. Reinsch thinks they should be placed in a new order, half way between algæ and fungi.

It is not, however, necessary for the physician to wait till this nomenclature is settled to consider its noxiousness or innocency. Dr. James R. Nichols, editor of the *B. Journal Chemistry*, last fall announced his belief that the *scum* or *film* on fishes, dead or alive, produced the pollution of the Cochituate. This he ably argued from the "cucumber" taste being imparted to water in tanks by the introduction of fishes covered with this film. We think Dr. Nichols is correct, so far as he goes, and we would corroborate him by thus calling attention to the saprolegnias that make up this film. Some years ago Prof. Reinsch, in Boston, at my request, examined the saprolegnias found on a small fresh-water fish, confined in a tank at the late aquarium of Mr. W. E. Baker, on West Street. He found seven different saprolegnias on this one fish, which he figured and described in his report to the writer. The profession is indebted to Dr. Nichols for his presentation, which will serve for the basis of future inquiry. It is also pleasant to see a chemist like him giving to botany its proper place in the estimation of the impurities in water. I am glad to add, there is not an abundance of saprolegnia in Croton. If there were, common sense would instinctively urge us to the distal filtration of the water before it enters the mains, for no one wants to drink the vegetation of dead and decaying fish and flies.

Sponges.—G, Fig. 1, is a spicule of fresh-water sponge, spongilla fluviatilis. Sponges belong to the animal kingdom.

Group 1. Keratosa, with horny fibres. In this group come the common sponges of commerce, marine.

2. Calcispongia, with calcareous spicules.

3. Silicea, aquatic, with spicules of silica like our cut. The office of these spicules is not settled, though thought to be what answers to the skeleton of the animal. They are, however, characteristic of sponges when found.

The essential element of the sponges is a sarcode or protoplasm or bioplasm, which appears to be, after death, soluble in water, and hence will go through all filters, and contaminate the water, making it smell like dead worms or cucumbers. This the writer discovered some years ago in the hydrant water of Woburn, Mass. The taste did not reveal them, but the smell did! Lately (September, 1881), however, the researches of Professors Remsen and Farlow have discovered the great cause of pollution in the Cochituate to be due to the Spongilla lacustris and S. fluviatilis. The writer quotes history confirming this as follows:

First.—Extract from *Herald*, Boston, September 29, 1879, communicated by the writer, column 2, line 24: "But the most noxious of all, in my opinion, are the *fresh-water sponges*. This, as a cause of pollution, I think, is a discovery of my own. At least, the doctrine of the noxiousness of sponges is new, so far as I can learn. For many months we (Professor Reinsch, Dr. G. B. Harriman, and myself) had observed sponge spicules in the Mystic and other waters in the vicinity of Boston. Those who are familiar with sponges know that they are jelly like animals, distended with glass-like skeletons, broken up into beautiful cylindrical forms, pointed at both ends, sometimes smooth and sometimes covered with little spines, clear as crystal, and called spicules. We never found the sponges these spicules came from in hydrant water, the jelly-like parenchyma being broken up and dissolved. Mr. William Edwards, of South Natick, Mass., lately collected for me some sponges growing on rocks in Charles River at that point. They were small, but showed a layer of spicules distributed over the outside of the body

of the animal; but the sponges were so meagre in quantity that they seemed insufficient to explain the abundance of the spicules found in Cochituate water. Soon after this, on Charles River, at a point opposite Ridge Hill Farm railroad station in Wellesley, I discovered a crisp, green, rough branch-like object, between three and four feet long and one half inch in diameter. On examination, it was found made up of green sarcode, or protoplasmic jelly, from the conical eminences of which were shooting forth as, if vomited from a volcano, spicules of sponge. To my mind the presence of this immense sponge is a sufficient explanation of the abundant source of the spicules of this kind of sponge, so frequently met with in our drinking-water. Furthermore, on keeping a portion of the specimen in a tumbler of water for a few hours, the water acquired exactly the peculiar rank, fishy odor that gives the cucumber smell and taste. In my opinion, if the observations made by me are verified by others, these large fresh-water sponges constitute the greatest impurity of our drinking-water, as they furnish an abundant field for the development of the noxious vibriones, bacteria, and fungi. I will add that the bad odor I have named should be a sufficient warning to users to be cautious in the use of such water. The sponges are now on exhibition at the Wellesley Hotel."

Second.—Subsequently I discovered a mass of sponges in the Charles river large enough to fill a two-bushel basket. This I collected and showed to various parties, among whom were Prof. A. Hyatt, of the Natural History Society, Boston. He referred me to a Mr. Thomas Higgins, salt merchant, of Liverpool, Eng., as the greatest authority on fresh-water sponges. Mr. Higgins kindly responded at some length to my communication, thanking me for the specimen I sent packed in a half-gallon jar in alcohol, and saying that the specimen was deposited by him in the Museum of Natural History, at Liverpool, as coming from me in the behalf of this evidence of water pollution.

Mr. T. Metcalf, of Metcalf & Co., 39 Tremont Street, furnished the alcohol; Dr. G. B. Harriman, 94 Tremont Street, Boston, and Mr. Amos Haynes, 5 Central Street, Boston, assisted in this matter, and can testify to the truth of this statement.

Third.—In an open letter from the writer—found in the *Globe*, Boston, March, 1880, published by the City Water Board, column 1, line 58—occur these words: "But included in the above are always found the spicules of sponges; indeed I cannot remember a hydrant water that I have examined without finding the sponge spicules. I have been led to infer that the fresh-water sponges are a great cause of pollution. They are of immense size. . . . Observers reported, at a late demonstration I gave your Board at City Hall, similar large masses of sponges found in the Cochituate Lakes and Concord River. . . . At Fresh Pond, Cambridge, the screens of the water-works have often been observed to be covered with portions of broken-up sponges, giving forth the fetid, familiar odor of worms and cucumbers. There is no doubt that *sponges are a source of pollution.*"

The above evidence applies with force to Croton. When, about one year ago, there was a great complaint of the hydrant water in New York, the spicules of sponges were very abundant, and once in a while several spicules were found sticking through a yellowish mass that appeared to be *dead* sarcode or protoplasm.

There is no doubt, then, that sponges do contaminate Croton water when the water tastes badly, and that the complaints of those who dislike it are not groundless.

Pelomyxas (I, I, I).—Pelos (mud), and myxa (mucus). These are protoplasmic animals classed with the rhizopods—rhizos (root), and poda (foot)—root-footed animals.

They are fresh-water organisms, forming large amœboid masses of brown or yellowish color. They gorge themselves with mud, and perhaps might well be called by the English signification, *mud mucuses.*

These are common in Croton and hydrant waters. For a long time I was accustomed to call them masses of humus, as they appeared in broken, irregular, shapeless masses, but having found quite a number of perfect forms in greater abundance when the water tasted badly, and since they are closely allied to the sponges, I think they should be included in the estimation of animal impurities, like the sponge. I have thought—but I may be mistaken—that the peculiar, dry bitterness of the water might be due to the pelomyxas, as I have found them specially abundant at that time.

Other rhizopods, as *difflugia* (J, Fig. 1; C, Fig. 1), *nebela* (F, Fig. 1), *plagiophrys* (L, Fig. 1), E, *amœba.* I think, when killed like sponges by the drought and excessive waste of water, by the mud being laid bare, that they must pollute the water; how much, in our present state of knowledge, cannot be told exactly. Here is a wide field of effort opened for exploration, and it is fervently hoped, for the sake of State medicine and public health, it will be immediately thoroughly occupied.

These all are found in the hydrant water, showing that they have the power to locomote away from the mud supposed to be their only habitat, through the upper and marginal portions of the lakes. Indeed some of them I have obtained by dipping water with a tumbler from the central surfaces of lakes! When alive and healthy I suppose they are not suspicious—only when dead and decaying.

Gemiasma verdans (H, Fig. 1).—This is interesting as being one of the so-called ague plants, found in great abundance in ague tracts in and near this city in low marshy or boggy soils in the morning before the sun is up—growing up in the night and killed by sunlight. Found on soils above named, in August, September, and October, but quite common in Croton water washed to from the watershed. Studies into the mode in which they cause ague *prove* their introduction into the system by inhalation, so that when taken into the stomach it is not probable they induce the disease, though in old cases they are found in the blood, urine, sweat, and sputa of patients. It would bear studying.

M, Fig. 1, is a collection of common *yeast-plants* found in Croton more at some times than others, and more likely to be injurious the longer the water is kept standing in vessels. Reinsch regards yeast as a poison when present in quantities, and says that were it not killed by baking, bread would be a poison to man. This should be studied carefully.

N, Fig. 1, *Leptothrix.*—Most abundant sometimes on letting Croton water stand twenty-four hours. While the leptothrix buccalis of every one's mouth is innocent, it is a subject of inquiry to know whether the one whose delicacy cannot be represented here in a cut, is nocent or not.

O, Fig. 1, is an *epithelium* from the skin of a consumptive with a collection of yeast-plants within.

By way of suggestion, in closing, for protection of

any who desire it, the best mode is to filter through cotton cloth, often changed and removed, and then boil the water. If desired to be drank cold, it may be put into clean bottles, and set into a refrigerator.

To show the difference between Croton and well water, in morphological points of view, the following analyses are appended:

APPENDIX A.

Croton water examined, December, 1881:

1. Abundant Mycelial Fungus Fil. 2. Acineta Tuberosa. 3. Actinophrys Sol. 4. Amœba Proteus. 5. Amœba Radiosa. 6. Amœba Verrucosa. 7. Anabeina Subtilis. 8. Anguilla Fluviatilis. 9. Ankistrodesmus Falcatus. 10. Anurœa Longispinis. 11. Anurœa Monostylus. 12. A new Rotifer. 13. Arcella Mitrata. 14. Arcella Vulgaris. 15. Argulus. 16. Arthrodesmus Convergens. 17. Astrionella Formosa. 18. Bacteria. 19. Bosmina. 20. Cœlastrum Sphericum. 21. Centropyxis. 22. Chilomonads. 23. Clathrocystis Æruginosa. 24. Cosmarium Binoculatum. 25. Closterium Lunula. 26. Cyclops Quadri Cauda. 27. Cyphroderia Ampulla. 28. Cypris Tristriata. 29. Daphnia Pulex. 30. Desmids. 31. Diaptomus Castor. 32. Diatoma Vulgaris. 33. Difflugia Globosa. 34. Difflugia Cratera. 35. Dinobryona. 36. Diptomus Castor with Saprolegnia attached. 37. Dirt. 38. Enchyls pupa. 39. Eosphora Aurita. 40. Epithelia in great abundance. 41. Euglenia. 42. Euglypha Cristata. 43. Feather barbs. 44. Fragillaria. 45. Gemiasma Verdans, ague plant. 46. Globar Rotifer. 47. Gomphospheria. 48. Humus. 49. Hyalosphenia Tinct. 50. Hydra Viridis. 51. Leptothrix writhing like a snake. 52. Melosira. 53. Monactina Octinarius. 54. Monads. 55. Naviculа. 56. Nostoc Com. 57. Nitzschia. 58. Œdogonium. 59. Ovaries of Entomostraca. 60. Pandorina Morum. 61. Paramecium Aurelianum. 62. Pediastrum Pertusum. 63. Pediastrum Boryanum. 64. Pediastrum Incisum. 65. Pediastrum Perforatum. 66. Pelomixas. 67. Peridinium Cinctum. 68. Plagiophrys. 69. Platyptera Polyarthra. 70. Polycoccus. 71. Radiophrys Alba. 72. Ram's horns Scenedesmus. 73. Rotifer Vulgaris. 74. Saprolegnia. 75. Scenedesmus Acutus. 76. Scenedesmus Obtusum. 77. Scenedesmus Quad. 78. Sheath of dead Tubellaria. 79. Silica. 80. Spherotheca. 81. Spicules of sponge. 82. Spirogyra. 83. Starch 84. Staurastrum Furcigerum. 85. Staurastrum Gracile. 86. Staurogenium Quad. 87. Synchoeta. 88. Tubellaria. 89. Tetraspora. 90. Trachelomonas. 91. Uvella. 92. Volvox Globator. 93. Vorticella, new species. 94 Vorticella Microstoma. 95. Other Vorticelliana. 96. Yeast.

APPENDIX B.

Morphological examination of specimen of spring water from the farm of Mr. George Plum, Mantua, Ohio:

1. Bacteria. 2. Diatoma Vulgaris. 3. Epithelium from vegetables and animals. 4. Feather. 5. Linen Fibre. 6. Mass of vegetable cells, probably of some berry. 7. Protococcus. 8. Silica or sand. 9. Small masses of dirt. 10. Spherotheca—a Fungus spore. 11. Starch. 12. Tubellaria. 13. Woody fibre.

THE AIR FROM THE NORTH POLE, which geographical landmark has been exciting much attention of late, is said by Jolly to be considerably richer in oxygen than the air from the equator. This is thought to be due to the fact that in the equator much more oxygen is used up in the building of plants and animals.

THE RECOGNITION OF MICROCOCCI.

BY GEORGE M. STERNBERG,
SURGEON U.S.A.

A PAPER by Dr. Rollin R. Gregg, of Buffalo, N. Y., which appeared in THE MEDICAL RECORD of February 11th, p. 150, is so well calculated to mislead those who are not familiar with the methods depended upon for the recognition of bacteria by those microscopists who have of late years devoted themselves to investigations relating to the rôle of these organisms in disease, that it seems to require an answer in the interest of those busy practitioners of medicine who have little time for personal investigations, but whose practice must be greatly influenced by the verdict which their judgment gives upon the extensive and rapidly extending array of experimental evidence spread before them in medical journals and scientific periodicals.

Unnecessary doubts and difficulties in the way of forming a correct judgment, such as the suggestion or rather affirmation, by the writer in question that Wood and Formad, in their investigations relating to the etiology of diphtheria, have mistaken "*granules and fibrils*" of fibrin for bacteria of corresponding forms, no doubt influence a certain number of readers, and are to some extent a check upon the diffusion of scientific knowledge.

That accomplished microscopists like Drs. Wood and Formad, and by inference their predecessors

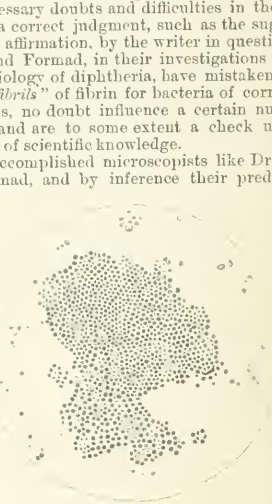


FIG. 1.

and fellow-workers in the same or parallel fields of investigation, including such names as Pasteur, Koch, Klein, Burdon-Sanderson, Eberth, Oertel, etc., have all along mistaken granules and fibrils of fibrin for the minute vegetable organisms known under the general name of bacteria, and in the words of the writer referred to, that "no observers of these assumed bacteria appears ever to have stopped to consider whether his alleged bacterial forms might not be the long and well-known forms of coagulating fibrine which are always found existing in the same positions under precisely the same circumstances," is a supposition which scarcely needs refutation and could hardly come from one familiar with the literature of the subject and with the painstaking and protracted character of many of the experimental researches made by men of scientific training and by the most exacting methods of modern scientific research.

The investigations of many independent investigators have demonstrated conclusively the abun-

dant presence of micrococci in diphtheritic exudations, and the real question is no longer as to the presence but as to the import of these organisms in such situations.

Are they accidentally present because a suitable pabulum and conditions as to heat and moisture favoring their development are here found? Or are they responsible for the specific inflammation attended with fibrinous exudation which constitutes the local lesion in this disease?

This question I shall not attempt to discuss, as it is only by carefully conducted experimental inquiries, such as Drs. Wood and Formad have undertaken, that it can be decided. But the question of the presence of micrococci in diphtheritic exudations is a much simpler matter, and, as already stated, this

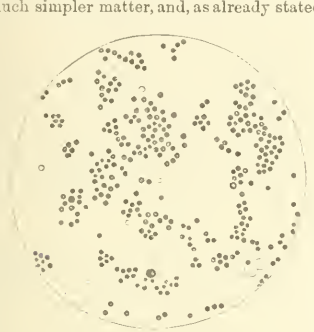


FIG. 2.

is definitely settled in the affirmative, not only by the microscopical researches of Drs. Wood and Formad, but by those of Eberth, Oertel, and others.

As, however, it is well established by the observations of numerous microscopists in various parts of the world (Remak, Robin, Niedhardt, Billroth, Koch, Butlin, Rappin, and others) that micrococci are found in abundance in the buccal secretions of healthy individuals, the mere presence of micrococci in diphtheritic exudation can have but little weight in a consideration of the question of etiology, especially as the diphtheritic micrococci do not differ morphologically from those obtained by the cultivation of tongue-scrapings from healthy individuals (*vide* report of Wood and Formad, Supplement No. 17, *National Board of Health Bulletin*, p. 8). This morphological resemblance, if not identity, is shown by photo-micrographs made by myself, several of which are enclosed for inspection by the editor of this journal. Two of these are from culture-experiments, made in Baltimore, in which sterilized rabbit-bouillon was inoculated with a little saliva scraped from my own tongue. (Figs. 1 and 2.) The others (Figs. 3 and 4) are from diphtheritic material sent me by Dr. H. C. Wood for the purpose of making photo-micrographs of the micrococcus present. This was labeled "Diphtheritic Material from Ludington," and was spread upon a thin glass cover (dry). The staining of the micrococci for the purpose of photographing was done by myself, in this instance with aniline violet. Both photographs were made with a Zeiss one-eighteenth inch homogeneous oil immersion objective, and the amplification is the same in both—1,000 diameters.

With an objective of this power the experienced eye can easily recognize micrococci of this size, and the expert is able to decide by microscopical examination alone, that certain granules are or are not micrococci, whereas a lower power or want of experience in the study of these organisms might leave the question in doubt. But where important questions are involved experts do not trust to optical appearances alone. Fortunately, we have other and very positive methods of distinguishing these minute vegetable organisms from inorganic granules, organic debris, or *fibrin granules and fibrils*.

Micrococci are unicellular vegetable organisms which, in a suitable medium and under favorable conditions multiply rapidly by fission, and the most reliable test is conceded by all authorities to be that of cultivation in a sterilized liquid. Minute spherical bodies, which multiply by fission, and which in the process of multiplication are joined in pairs or chaplets, are living organisms, and not granules of fibrin.

That the importance of this test was fully appreciated by Drs. Wood and Formad is shown by the following extract from their report:

"The most important distinguishing point between micrococci on one hand, and organic and inorganic particles on the other hand, is obtained by culture. Micrococci will always multiply, though some much more rapidly than others. They elongate, divide, form chains or zoogloea masses, if brought into a suitable culture-medium."

We have also chemical tests which are quite as positive as many of those relied upon by chemists in their laboratory operations. The most important of these depend upon the fact that bacterial organisms resist the action of strong acids and alkalies which promptly dissolve granular material of animal

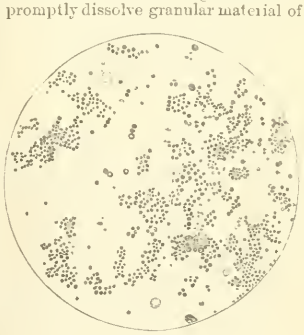


FIG. 3.

origin, and that they are deeply stained by the aniline dyes and by hæmatoxylin. The application of all of these tests requires experience and technical skill, but the results, when proper precautions are taken, are as definite as could be desired.

I have been particularly interested in the observations of Drs. Wood and Formad, relating to the presence of granules, believed to be micrococci, in leucocytes present in diphtheritic material. Dr. Gregg, in criticising this observation, says, "I feel confident that the micrococci, to the number of forty or fifty, which Wood says he saw in each white blood-cell, were nothing more nor less than the *granules* which *naturally* constitute every white blood-cell."

I have myself frequently met with these leucocytes

containing numerous minute granules undergoing active Brownian movements in the blood of septicæmic rabbits, but I have not yet been able to satisfy myself whether they are really micrococci, or whether they are granules formed or set free in the diffluent and disorganized protoplasm of a dead leucocyte. This is a question to be determined by continuous observation and by culture experiments, such as Drs. Wood and Formad are engaged in, and I shall look with interest for their final decision.

I have elsewhere suggested that possibly one of the functions of the leucocytes is to rid the blood of bacterial organisms which may find their way into the circulation, and that they do this by picking up these foreign bodies—as they have been shown, experimentally, to pick up particles of carmine, etc.—and disposing of them by digestion, just as the *amœba* picks up and digests the nutritious portions o fminute vegetable organisms which come in its way.

If there is any truth in this hypothesis, we can easily understand how, in case the vital energy of the leucocyte was enfeebled from any cause, or the

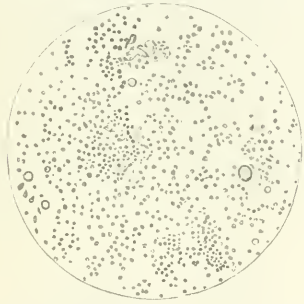


Fig. 4.

reproductive energy and vital resistance of the engulphed micrococcus exceptionally great, this provision of Nature might fail and the captured foe might feed upon the vitals—protoplasm—of its captor, the result being a dead leucocyte filled with living micrococci.

However this may be, I can scarcely doubt that the actively moving granules in the leucocytes of septicæmic rabbits, which I have repeatedly observed in blood taken from the heart, from the liver, and elsewhere, are of the same nature as the granules described as micrococci by Drs. Wood and Formad in the leucocytes found in diphtheritic false membrane. I am quite familiar with the obscurely granular appearance of the protoplasm of living leucocytes from the blood of healthy men and animals, but these granules, imbedded in the semi-fluid protoplasm, are quite different in appearance from the minute, highly refractive spherical bodies which I have seen swarming—Brownian movement in the liquid contents of cells, which I suppose to be dead leucocytes, contained in the blood of septicæmic rabbits.

These are uniform in size, but much smaller than the micrococci found in human saliva, the introduction of which beneath the skin of a healthy rabbit produces fatal septicæmia, as described in my special report to the National Board of Health (*National Board of Health Bulletin*, April 30, 1881).

ASPIRATION OF THE KNEE-JOINT.*

By WILLIAM JUDKINS, M.D.,

SURGEON TO THE HOME FOR THE AGED, CINCINNATI, OHIO.

Dr. Henry O. Marcy, of Cambridge, Mass., has well said † "the landmarks of our fathers in surgery have become of small value in these days of careful inquiry and patient research, of radicalism and reform." Little respect is now paid to dogmatic teaching. Old truths are re-examined, sifted from error and associated with new facts in such a way that new teachings are evolved, and the "thus far and no farther" of even our student days is no longer heeded. Until recently the peritoneum was held sacred from the ante-mortem touch of the scalpel; yet to-day it is subject to surgical manipulation almost without fear, and, with proper care, without serious danger.

Most of us were taught that accumulations of fluid in the pleural cavity should not be surgically interfered with; and it is a well-known fact that an honored ex-president of the American Medical Association, Dr. H. I. Bowditch, of Boston, was subject to criticism and reproach, indeed, almost ostracized by the conservative leaders of the Boston profession for believing these fluids could be withdrawn with benefit, and daring to put his theories to the practical test.

The instrument of Dieulafoy, with its finer needles and exhaust-bottle, opened up greater possibilities, and avoided many dangers in the evacuation of fluids from closed cavities. This, seconded by the indefatigable spirit of its inventor, called the attention of the profession, all over the world, early to the advantages of the new instrument, and placed it in the hands of a large proportion of surgical practitioners. With it, new experiences have arisen, and naturally its use in the synovial effusions of the joints was suggested, especially that of the knee, so long and familiarly known as "white swelling."

The surgical experience of two thousand years had taught the extraordinary danger to limb and life of injuries to the knee-joint which opened its cavity; and no one principle of surgery had been better settled, for many generations, than that of non-interference with the accumulations of fluid within the joint. Under the influence of such conservatism it is no wonder that the question is still *sub judice*, and that many of our wisest and best surgeons still believe that medical and external applications are the only advisable means to be employed in the treatment of such affections.

Until Dr. Marcy's valuable experience was given to the profession, not much had been written upon the subject. In "Bryant's Surgery" the following brief note is found: "Paracentesis of the joint is an operation that has been performed, and, in the hands of some surgeons, with wondrous success. Dr. Foyrer, of Calcutta, is one of its strongest advocates, having shown that in the chronic and subacute forms, much good is often obtained by the operation, if care be taken to exclude the air by carefully closing the puncture and fixing the joint on a splint.

"The drawing off of the fluid affords instantaneous relief. I have performed this operation once with a good result in a case in which tension of the joint was extreme, and in another case, operated on by Mr. Cock, a similar result was obtained. It is a

* Read before the Cincinnati Medical Society, February 14, 1882, and the Academy of Medicine, February 20, 1882.

† Trans. Am. Med. Assn., 1879.

practice, however, that ought to be followed with extreme caution."

On April 1, 1879, Dr. Marcy addressed one thousand circular-letters to the surgical profession of America, hoping by "multiplied experiences to aid in settling a question of so much importance."

Prior to February, 1875, he had never used the aspirator for the removal of fluids from the knee-joint. At the time his paper was read at Atlanta, Ga., in May, 1879, he had thirteen cases of his own, and had reports from twenty-two surgeons, giving the clinical histories of fifty-three cases, making a total of sixty-six cases; sixty-eight joints aspirated, in all one hundred and eighteen times; the quantity of fluid varying from one-half an ounce to eight or more ounces. The character of the fluid was serous, sero-purulent, and sero-sanguineous.

The causation in one case was syphilitic, in two cases, septic; in three, gonorrhœal; in four, chronic inflammatory; in eight, rheumatic; in ten, acute inflammatory; in twenty-three, traumatic, and in eleven, not specified. In his own cases the quantity of fluid varied from one and one-half to six and one-half ounces. Specific gravity, 1012 to 1040. The average quantity was about four ounces, and the average duration of treatment was about four weeks. Nearly all the cases are reported as excellent in result, with perfect use of limb; two or three as fair or improved; and only one death is reported in which suppurative inflammation followed.

Strengthened in my belief by the study of Dr. Marcy's highly valuable paper (read before the American Medical Association at Atlanta in 1879 on the subject), and to whom the essayist is under many obligations for aid in the preparation of this article, that this mode of treatment—aspiration for effusion in the knee-joint—was safe and worthy a trial, I proceeded to operate, October 12th, on Mr. S——, who presented himself a few days prior for treatment, with the following history: was twenty-nine years of age; single; merchant; moderate drinker. Four years ago he contracted a gonorrhœa, with soft sore, located on the under part of the gland. The latter healed readily in two or three weeks. The gonorrhœa proved obstinate. Going to an Eastern city to attend college, he passed from under the writer's care, but from what he now tells me I have reason to suppose a stricture of some magnitude resulted. Returning to the city during the summer months, a fresh gonorrhœa was contracted.

October 9th.—He called on me with the statement that the discharge had been upon him freely for two days. Ordinary treatment of an astringent injection was ordered.

October 11th.—Was telephoned for early in the morning, and, on arriving at the patient's bedside. I found, on examination, swelling of the left knee joint measuring sixteen inches, fluctuation to some extent, with excruciating pain; discharge from penis almost ceased; temperature, 100°; pulse, 112. Opiates hypodermically and internally gave some slight relief. The joint was painted with collodium cum cantharide.

I found on the next visit that he had a sleepless night; distention of joint more marked, measuring seventeen and one-half inches, an increase of one and one-half in twenty-four hours; temperature, 102½°. The cantharides had failed to raise a blister. Realizing the gravity of the trouble, and with the hope of giving some relief, I introduced a No. 1. aspirator needle, and withdrew four ounces of clear serum. Great relief was experienced, and much gratitude expressed. A plaster-of-Paris splint was applied from the toes up two-thirds way of the thigh, with a fenestrated opening over the point of puncture.

Was seen again that afternoon, and found him resting very comfortably. Had partaken of food liberally and had slept for four hours. Temperature 99°.

During the night following, the swelling and pain increased; temperature ran up to 101½°; pulse, 115; re-aspiration was performed, with the result of having three ounces and two drachms of fluid which was characteristic in appearance. Under the microscope some exudation corpuscles were seen. Specific gravity, 1030. Great relief experienced. Pot. iodide, gr. xv., ordered every three hours.

Knowing the experience of Dr. Marcy and the testimony of Dieulafoy, that in this class of cases their obstinacy is proverbial, I was no ways surprised to find on my next visit a re accumulation of the fluid, with corresponding increase of temperature and pulse. The needle was introduced for the third time, and two ounces and seven drachms withdrawn. Fluid was of same character as heretofore. Specific gravity, 1025.

October 15th.—Withdrew two ounces.

October 17th. — Withdrew one ounce and six drachms. From this time on little or no pain was felt.

No injection of carbolic acid was used after the aspirations, neither was the antiseptic spray employed. Within a fortnight after the first introduction of the needle he could walk with the aid of a light cane. Motion was good and there has been no tendency to any relaxation of the ligaments up to the present time.

The aspirator used on this occasion was that devised by Potain, which is a modification of Dieulafoy, and is probably superior to it in many respects.* "The parts of this apparatus are an air-pump, blunt cannulæ of various calibres, with blunt- and sharp-pointed stylets; an india-rubber stopper perforated with two curved tubes, each having a stop-cock, a bottle and rubber tubing. The stopper is conical in shape and of a size rendering it adaptable to the necks of ordinary bottles, varying in capacity from a pint to half a gallon or more. The bottle is first exhausted of air by the air-pump; then the cannula enclosing the sharp pointed stylet, being attached to one of the tubes in the stopper by a piece of flexible tubing, is pushed through the integuments into the cavity containing the fluid to be evacuated. On withdrawing the stylet and opening the stopcock, the fluid passes quickly into the bottle. With Potain's aspirator all unpleasant odors are conveyed into the bottle reservoir, and therefore do not escape into the patient's room." On one occasion only—the first—was the canula that comes with this aspirator used, preference being given to the one made by Messrs. Wocher & Son, of this city, at the suggestion of our distinguished townsman, Dr. W. W. Dawson, and known as the "hooded point," which, when in position, prevents any probability of hemorrhage from the walls of the cavity that may come in contact with the probe point. Under the date of January 2, 1882, Dr. Marcy writes:

"Dr. Wm. Judkins:

"Dear Sir— . . . . I have since continued aspiration and injection of the knee-joint with increas-

* The International Encyclopedia of Surgery. Dr. John Ashhurst, Jr., editor, vol. i., page 520.

ing confidence and success. Have aspirated now between one and two hundred times, and often injected carbolic acid, three per cent., and in every case with, or followed by, improvement. Every acute case seen early has recovered perfectly. Reported to British Medical Association, last year. I shall be very glad to hear of your good work and to meet you at St. Paul in June next.

"Permit me, yours very resp.,

"H. O. Marcy.

"116 Boylston Street, Boston, Mass."

One of the many replies to Dr. Marcy's circular, that of Dr. W. M. Fuqua, of Hopkinsville, Ky., reads:

"Have operated twice by aspiration, and twice by incision. Three were traumatic cases, one resulting from erysipelas. Fluid withdrawn: from eight ounces to three drachms of healthy sernm. Coöperative treatment: extension by weights, fomentations, elastic bandage, rest, and immobility—by splint—if required. Convalescent in about thirty days. Subsequent condition good; limb safe; flexibility impaired, yet locomotion well performed.

"I would advise always to remove imprisoned fluid by aspiration, if possible. I do not fear atmospheric air. The aspirations, to do good, must be done early. I would not limit the operation to any class of cases. Passive motion was used just as early as the cases would admit of it. When the joint was opened by incision, carbolic-acid solution was used once daily. Patient was sustained by good diet, and stimulants, if required; opium at night; and supported by pretty firm bandage—elastic if preferred.

"This is surely an important subject. When I first dared to open the knee-joint, my medical brothers were appalled, and aspiration of the hip-joint was regarded in the same light.

"Is it not our important duty to give an outlet to pus in lumbar and psoas abscess also?"

January 18, 1882, I received the following from the doctor:

"My Dear Doctor:

". . . . In reply to yours of 13th, will state I have seen four cases of synovitis of the knee-joint, and one case of synovitis of the ankle joint since my communication to Dr. Marcy in 1879. . . . Two of these cases were aspirated at once, one treated by plaster bandage, and the other by elastic compression, extension and splint, after aspiration. In the one case, the plaster bandage was removed four times—was permitted to go about on a crutch—he perfectly recovered. The other case recovered with slight impairment of motion, due to organization of inflammatory products within the joint. My third case, a girl of fourteen, after fairly recovering from a serous dysentery had swelling and effusion in left knee-joint. Aspiration was not permitted; but she slowly recovered by means of compression with elastic bandage and blisters. Now, what relation did the effusion bear to the dysentery?—was it pyæmic? The fourth case also treated by compression with elastic bandage, blisters, etc. The two cases perfectly recovered in two months. The case of synovitis of ankle-joint, the result of an injury, at first I was disposed to regard as scrofulous; he was pale, bloodless, sleepless, and without appetite; pain and tenderness intense upon the slightest motion. Aspiration greatly relieved him, and being unable to make extension, because of the want of suitable appliances, I simply applied the plaster bandage, which was removed from time to time as the swelling became less. He recovered perfectly after four months. Injuries to the joints, and their effects ultimately on the constitution, induce a pathological state, which, at first sight, would be regarded as scrofulous. I think in all sincerity I can state that I have never seen a Potts' disease of the spinal column, a morbus coxarius, or the chronic osseous disease of the tarsus and carpus that was not of traumatic origin. . . . . .

"I am, Doctor,

"Very truly yours,

"W. M. Fuqua."

Our well known neighboring surgeon, Dr. Kearns, of Covington, Ky., in reply to my note, returns my circular, January 25, 1882, with the following answers:

Number of cases. One.
Cause. Supposed to be rheumatism.
Number of aspirations. One.
Amount of fluid withdrawn. None.
Was plaster splint used? Yes.
How long under treatment? Eight months.
Result. Ankylosis.

Remarks.—Rapid enlargement, which, after two months' treatment with blisters, iod. potash, mercurial inunction, and plaster splint, seemed to contain fluid; joint freely entered. No fluid found; no unpleasant results from needle; leg commenced flexing; great pain and threatened dislocation. Under chloroform extended; plaster splint resumed. Result, perfect health, with a permanently straight and stiff leg.

Dr. William A. Byrd, of Quincy, Ill., Secretary of the Surgical Section of the American Medical Association writes, January 29, 1882:

"William Judkins, M.D.:

"Dear Doctor—Your favor of the 26th came duly to hand. My first aspiration of the knee-joint was done in 1875 for hydrops articuli, from gonorrhœal rheumatism. There were sixteen aspirations, as follows: July 15, 1875, 6 ounces; July 16th, 6 ounces, 2 drachms; July 17th, 2 ounces; July 18th, 7 ounces; July 21st, 5.20 A.M., 3 ounces; July 21st, 9 P.M., 8 ounces; July 24th, 4 ounces; July 25th, 6 ounces; July 31st, 4 ounces; August 2d, 7 ounces; August 5th, 5 ounces, 4 drachms; August 6th, 6 ounces; August 7th, 4 ounces; August 8th, 5 ounces; August 9th, 4 ounces, 2 drachms; August 10th, 4 ounces; August 14th, 3 ounces.

"There were seventy-nine ounces of fluid removed by the sixteen aspirations; the greatest amount in one day being eleven ounces, which was removed by a morning and evening operation. At times aspiration was performed when there was not much fluid in the joint, but experience taught me to aspirate whenever the temperature was high. After the operation, the temperature would invariably fall three or four degrees within an hour. I was assisted at various times in the treatment of this case by Drs. I. T. W. Wilson, J. W. Niles, William and Charles Zimmerman, Joseph Robbins, and J. D. Smith, of Shelbina, Mo. I learned from this case that the best point for insertion of the needle to remove all the fluid, was at the inner and lower border of the patella. In addition to aspiration, I used Dr. L. A. Sayre's apparatus for extension of the knee-joint, with strapping with adhesive plaster. I have aspirated the knee joint a good many times since, but never but twice on the same subject, on

account of following the operation with Dr. H. A. Martin's elastic bandage, applied snugly from the foot to above the joint. There has been perfect recovery with the use of the joint in every case. The earlier the aspiration and the use of the elastic bandage the more speedy the recovery. I have not limited aspirations to the knee-joint, but have resorted to it in the ankle- and elbow-joints with equally as good results. While conversing about the aspiration of joints with Dr. Edward Hays, of Hannibal, Mo., something over a year ago, a woman came into the office having a swollen elbow-joint, with great pain and high fever. She had received no injury to the joint. I aspirated the joint at once, getting but about a drachm of fluid, and applied the elastic bandage. The relief was immediate, and her recovery was complete in less than a week. I have had cases of aspiration of the knee, where there was high fever and great pain, become free of fever, pain, and swelling, and be able to walk upon the limb with ease and comfort within four days after the operation and the application of the elastic bandage. Some of these cases I described in an article in the *Baltimore Independent Practitioner* of, I believe, September, 1880, pp. 422–424. I thought that I had a copy of the journal, but find that it has been misplaced, so that I am unable to send it to you. The article is entitled 'Some Suggestions in Regard to the Treatment of Gonorrhœal Rheumatism.' There is, I believe, an influence exerted upon the nerves by the retained fluids, that tends to keep up the inflammation and fever that has never been satisfactorily explained to me. The same view is entertained by Mr. Lister, and is ably set forth in his address on 'The Relation of Micro-organisms to Inflammation,' delivered before the Pathological Section of the International Congress, last August, and published in the London *Lancet*, American reprint, for January, 1882. You will find his remarks upon draining of housemaid's knee, p. 4, very *apropos*.

"Hoping that I have not wearied you with this rather disjointed letter about joints, and that you may have a good paper for the Surgical Section of the American Medical Association, at its meeting in St. Paul, next June, I remain,

"Very truly yours,

"William A. Byrd."

Dr. E. H. Bradford of Boston, Mass., published in the *Boston Medical and Surgical Journal*, a few years since, a review of the foreign literature on this subject, which is very *apropos*. Dieulafoy* reported one year since that he had aspirated the knee-joint two hundred times. He believes the operation is a rational and efficient one in a large class of cases. He uses the No. 2 needle, first placing a rubber bandage aroud the knee, leaving uncovered the place of puncture. His point of election is the external cul-de-sac of the joint, on a level with the upper border of the patella, and about two centimetres outside of this bone. Compression is used as soon as the fluid is evacuated, by a flannel bandage applied from the foot up to the thigh. This is removed in twenty-four hours, and, if fluid has collected it is re-aspirated.

The number of aspirations needed varies greatly. Bloody and other effusions into the joint following external injury usually disappear rapidly, and require but one or two aspirations before a cure is effected. Sero-fibrinous exudations (hydrarthrosis) vary in the number of aspirations from one to six; but though the treatment is long, the time before recovery is certainly shorter than that during treatment in any other way. Blennorrhagic hydrarthrosis is much more obstinate than any other form. More aspirations are needed before recovery, and the exudation returns quickly.

Scriber, of Baden, advises incision and drainage of the knee-joint in chronic serous inflammation; in chronic disease of the knee-joint with granulation, where there is effusion and no caries; in acute purulent affections of the joint with evident fluctuation; and in acute serous effusions, when the pain is so severe as to exhaust the patient. Incisions are to be made on both sides of the patella, and a thick drainage-tube is inserted; before the insertion of the tube, the joint is to be washed out with a solution (two and one-half to five per cent.) of carbolic acid. In chronic cases, if there are sinuses and fetor, a solution of chloride of zinc (twelve per cent.) is used instead. The operation is to be done with the strictest antiseptic precaution. In acute cases the tube should be removed in three or four days if the wound is sweet. If the secretion does not diminish quickly the joint should be washed out again, but the tube should not be left longer than ten days, for fear of irritation of the cartilages. In chronic cases, however, the tube may be allowed to remain for twenty to thirty days. The number of cases reported as treated in this way is six. No evil result took place in any of the cases, and the recovery is said to have been complete. Where there is caries of the bone present, it is the opinion of Scriber that excision offers the readiest method of treatment.

Heinecke,* however, reports two unusual cases where the joints were incised antiseptically, and a sequestrum and disease of the tibia were found; the sequestrum was removed; the diseased bone was chiselled out and scraped away. Recovery with some motion ensued in both cases. Heinecke cites, as examples of the advantage gained from the use of antiseptic precautions, ten cases of affection of the knee joint treated in the Magdeburg Hospital, where the knee-joint was incised and washed out. In all but two the joint was opened under spray. In two the opening was caused by a wound, but the joint was washed out with antiseptic solutions, and treated antiseptically. In seven cases the result was cure, with the establishment of perfect motion. In three suppurative knee-joints (two, the above mentioned joint affections complicated with necrosis of the tibia) there was only limited motion on recovery. Of the seven entirely successful cases, one was an acute serous inflammation; one hydrops articuli fibrinosus; one, sanguineous effusion; three were punctured wounds of the knee joint; one was the removal of a loose cartilage from the joint.

Schüller† reports two cases of antiseptic incision and drainage of the knee-joint; one in a case of chronic synovitis with sero-purulent exudation. Recovery followed, but details are not given. A second case was one of acute suppurative inflammation of the knee-joint following an attack of erysipelas. The patient died in fourteen days.

Rinne‡ reports eleven cases of knee-joint affection tapped with a trocar, and washed out with a three per cent. solution of carbolic acid. Of these eleven, in five there was no reaction after the sur-

* Gaz. des Hôpitaux, May 18, 1878.

* Deutsche Zeitschrift für Chirurgie, 1878, 10th Bd., p. 296.
† Deutsche Med. Woch., November 24, 1877.
‡ Centralblatt für Chirurgie, December 8, 1877.

gical interference; in four there was slight fever and a temporary return of the fluid. Nine are reported to have been completely cured, apparently, with recovery of motion at the joint; one died of tuberculosis; one was improved, but was unable to walk without the help of a stick.

One fact will be readily admitted: that experts in antiseptic surgery are much more bold, and claim better results than other surgeons. Ranke's statistics, read before the "General Congress of Surgeons," show unusually good results, which are attributed by the writer to antiseptic treatment. Out of seventeen cases of open wounds of the larger joints, fourteen recovered, with motion at the joints, both in cases where there was injury to the bone and where there was none. In the three which recovered with ankylosis, the patients did not come under treatment until after suppuration had been established. In no case did death follow. Schüller, in his report of the surgical clinic at Greifswald, gives the results of twenty cases of knee-joint affections treated by Hueter's method of injection (with a subcutaneous syringe) of a solution of carbolic acid (two to three per cent.). The injection is made either into the thickened capsule, or into the granulations on the extremities of the bones forming the joint. It is reported to have been particularly useful in serous and sero-fibrinous effusions. In such cases, more was gained in days and weeks by the injection than by months of other treatment. Of the twenty cases of knee-joint disease treated in this way (five serous and sero-fibrinous synovitis, two hydrops articuli, two chronic arthritis, eleven fungous synovitis), improvement is noted in all of the cases, except two; of these, one died of erysipelas, following the prick of the needle, and the other underwent excision. The method is not considered applicable in purulent synovitis. Thus it may seem that many of the leading European surgeons are much more bold in treatment of diseases of the knee-joint than those of our own country.

It is well known, that the differences between the synovial and serous membranes are not very great. The innermost layer of the synovial membrane is completely invested with nucleated cells. Over extensive portions of the membrane, in silver preparations, two series of tracings are detected. The upper layer corresponds quite closely with the outlines of the endothelium. The underlying layer shows the characteristic vascular net-work, with long rhomboidal and square meshes, the serous canaliculi being intermediate. Böhm claims to have shown that the blood-vessels open into and actually communicate with the serous canaliculi. Hueter asserted that he had never observed such conditions, except in inflammation, when the tension of the subsynovial lymph-paths was considerably increased; while Landzert, by employing his silver method, brings the lymphatics here into distinct view.

It is not difficult to picture the histological changes which are produced in acute inflammation. The serous exudation, the capillary injection, the venous stasis, are the first factors, which, unrelieved, rapidly go on to produce pathological results that have long been known to the profession as among the most disastrous known to surgery. Under the pressure and inflammatory changes, softening of the synovial membrane may, and probably in most instances does, take place. The cartilages and osseous structures readily become implicated, and their integrity impaired, while the ligaments themselves are so often involved in these disastrous changes, that Mr. Paget selects them as an illustration of the effect of inflammatory softening, such as permits that great yielding of them "which we almost always observe in cases of severely inflamed joints."

"We may see such changes in the ligaments of all joints, but we examine the effect of the softening best in diseased knee- and elbow-joints. The ligaments, softened during the inflammation, yield to the weight of the distal and unsupported part of the limb, and the joint is disturbed. Then, if the inflammation subsides, and the normal nutrition of the joint is restored, the elongated ligaments recover their toughness, or are even indurated by the organization or contraction of the inflammatory products within them. But they do not recover their due position, and thus the joint is stiffened in the distortion to which its ligaments had yielded in the former period of inflammation and permanent disability results.

"The lesson which the clinical testimony of this paper teaches," continues Marcy, and to whom I justly believe belongs the laurel crown for so prominently bringing before the profession, the advisability of this operation, "is to operate early, reaspirate as often as the fluid accumulates; aid by rest, compression, and fixation of the joint. If thereby we can avoid, in large measure, such deplorable results as above pictured, and such as present themselves to the study of every practitioner of medicine, may we not feel that our profession has taken another step in the right direction, and, by the establishment of truth, added in some share to the divinity of our art?"

216 RACE STREET, CINCINNATI, February, 1882.

THE SUCCESSFUL REDUCTION OF A BACKWARD DISLOCATION OF THE RADIUS AND ULNA SEVEN MONTHS AFTER THE INJURY.

BY GEORGE E. BREWER,

BUFFALO, NEW YORK.

A BACKWARD dislocation of the elbow of seven months' standing, reduced by Dr. Julius F. Miner, of Buffalo, recently came under my observation.

The extreme rarity of such cases, and the readiness with which reduction was accomplished, led me to a careful study of the subject as presented by surgical authors.

I was very much surprised to see how little was said in our books, or published in our journals: the whole subject being dismissed with the almost unanimous conclusion that such reductions were impracticable if not impossible.

I was also much surprised to find how uniformly unsuccessful had been the efforts of even the most experienced surgeons in attempting to better this condition, some authors even going so far as to assert that it should not be attempted after the sixth week.

Hamilton, in his valuable work on fractures and dislocations, cites but two instances of its successful reduction after seven months, one in his own practice and one reported by Starch.

With Dr. Miner's permission I report the following case, trusting that it may prove instructive to those interested in the subject of old dislocations.

Edward McCarty, aged twenty-one, of Crawford Co., Penn., in August last received a fall which re-

sulted in a backward dislocation of the radius and ulna. The injury was such as to baffle all attempts at reduction made by neighboring physicians. March 15th, about seven months after the injury, he consulted Dr. Miner, who found upon examination, that the dislocation was complete, both bones of the forearm being distinctly felt resting on the humerus about three inches above their normal position, the coracoid process of the ulna firmly imbedded in the olecranon fossa, and the arm immovably extended.

The patient was at once given a private room in the Buffalo General Hospital, when, on the following day, Dr. Miner in the presence of, and assisted by, many of his professional friends, renewed the attempt at reduction.

The patient was thoroughly etherized. Forcible extension was then made upon the arm. This was followed by an unsuccessful attempt at flexion, clearly showing further extension necessary before flexion could be accomplished. The tendon of the triceps was now divided about an inch above its attachment to the olecranon. Very powerful extension was then made (the combined efforts of four men), this, with forcible flexion, pronation, and supination was continued for nearly three-quarters of an hour. Then measurement, the ease with which the arm could be flexed, and absence of deformity, all indicated that the dislocation had been successfully reduced.

The arm was dressed at right angles, without a splint, and the patient placed in bed.

March 17th.—Considerable swelling of the parts. Passive motion attended with pain. Pulse, 110. Temperature, 99°.

March 19th.—Patient sitting up. Passive motion. Pulse, 90. Temperature, 98°.

March 22d.—One week after the operation. Motion without pain, but limited, owing to the œdematous condition of surrounding tissues. Patient left the hospital and went to his home in Pennsylvania, with every indication that complete recovery and good motion would eventually be obtained.

In these old dislocations of the forearm, especially where the displacement is considerable, the contracted triceps offers the chief muscular resistance to replacement.

Dixi Crosby, of New Hampshire, successfully replaced two old luxations of this kind by fracturing the olecranon. This method has also been successfully practised by Hamilton and others. Subcutaneous section of the tendon of the triceps seems to possess all the merits, while it lacks some of the disadvantages attending the fracture of the olecranon.

Since the above was written, Dr. Miner informs me that in October, 1869 assisted by his friend and colleague, the late Prof. Sanford Eastman, M.D., he reduced a similar dislocation in the same manner. Dr. Harrington, who also assisted Dr. Miner at that time, says that the dislocation was of nearly a year's standing. As no record was made of the case at the time, he is unable to state positively just how much time had elapsed since the injury.

Dr. Miner suggests that the reason more cases of the kind have not been reported, is not that such dislocations have not been reduced, but, as in his first case, no records were preserved.

A Training School for Nurses is to be established in connection with the Mary Fletcher Hospital, at Burlington, Vt.

ATROPINE POISONING SUCCESSFULLY TREATED BY MORPHINE.

By J. W. FLYNN, M.D.,
NEW YORK.

On January 16, 1882, Mrs. H—— called at my office stating that her child, fifteen months old, had drank some "eye drops" which had been prepared for another child of the same family. Upon questioning the mother, I found the child had taken about a teaspoonful of the mixture. Knowing it to be a two-grain solution of atropine, I concluded to test the value of morphia as an antidote. On my way to her house she told me she paid no attention to the child until some friends noticed, about one hour after taking the solution, he began to stagger and grab at imaginary objects. She then placed him in her lap and he caught hold of her as if falling, and crying as if he were greatly frightened at something.

Upon my arrival, I found him in a semi-comatose condition, pupils fully dilated, respiration fifty per minute, pulse could not be counted on account of tetanic twitchings of the whole body. Face and neck looked like a child suffering from an attack of scarlet fever. Gave some sulphate zinc, but he could not swallow. At 1 P.M. I injected 3 m. Mag. sol.; opisthotonos. 1.05 P.M., passed into a comatose condition; pulse, 160. 1.10 P.M., injected 3 m. Mag. sol. 1.20 P.M., injected 3 m. Mag. sol. and 15 m. brandy. 1.30 P.M., opisthotonos well marked. 1.45 P.M., injected 5 m. Mag. sol. and 20 m. brandy. 2 P.M., pulse, 144, irregular; respiration, 22; reflex irritability totally abolished; pupils the same. 2.30 P.M., respiration ceased during a tetanic convulsion; resorted to artificial respiration, electricity, and cold douches. 3 P.M., redness passing away, pupils the same; pulse, 144, irregular; respiration. 22; extremities cold; placed hot irons to feet and mustard to chest. 3.15 P.M., respiration ceased. 3.35 P.M., pupils the same; injected 5 m. Mag. sol. and 20 m. brandy; temperature, 98° F.; face pale. 4 P.M., respiration ceased; opisthotonos. 4.10 P.M., respiration, 22; pulse, 144; irregular. 4.45 P.M., injected 5 m. Mag. sol., 18 m. brandy, and 5 m. tr. digitalis; large tracheal râles. 5. P.M., pupils commence (?) to contract; pulse, 140; respiration, 22. 5.30 P.M., my friend, Dr. R. J. O'Connell, passed a soft catheter into the trachea and withdrew (sucked) a quantity of brownish mucus, which seemed to relieve the little sufferer; pupils contracting; no response to light. 6 P.M., respiration ceased; pulse, 140, irregular. 6.30 P.M., respiration ceased; injected 20 m. brandy. 7.30 P.M., respiration ceased. 7.40 P.M., respiration ceased. 8 P.M., pulse, 120; respiration, 18; slight reflex irritabilty; pupils contracting. 8.30 P.M., respiration ceased. 8.50 P.M., respiration ceased. 9 P.M., pulse, 120; respiration, 16; temperature, 98 F; opened his eyes and moved his head to one side. 9.30 P.M., attempts to sit up. 10 P.M., is quite restless and seems to be in pain; pupils very large; light causes him to close his eyes. Gave him some milk, he grabbed the glass with great avidity, but could not swallow much; face pale. Prescribed 1½ drop tr. opii every hour.

January 17th, 12 M.—Had a convulsion which lasted about thirty minutes.

From this time on he made a slow recovery, suffering greatly from tympanites, vomiting, and inability to pass his urine. Pupils remaining large for some days. On January 21st, desquamation of the skin on face and neck.

The points of interest in the case are the action of the pupil, the pulse, and the cessation of respiration so often. It may be noticed that it was seven hours before any marked contraction of the pupil occurred, the pulse remaining high throughout. The cessation of respiration somewhat alarmed me at first, thinking I (and I suppose others will say) had given too much morphia, but it was due to a tetanoid convulsion, especially marked in the arms and body, each time the cessation took place. The respiration remained at 22 per minute for seven hours, suddenly falling to 18, and an hour later to 16. After this no more convulsions occurred. I resorted to artificial respiration principally (electricity seemingly not having much effect on respiration) each time respiration ceased.

If I ever have the fortune (?) to get a similar case, I will use morphia again and *push* it, and will not place much reliance upon the pupil or pulse, but be guided by the respiration.

Before concluding, I must return thanks to Drs. R. J. O'Connell and P. H. Flynn for their kind assistance, and also the keeping of the notes of the case.

246 East Seventy-fourth Street.

Reports of Hospitals.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, LONDON.

Under Care of DR. GRIGG.

PORRO'S OPERATION—CHILD SAVED—DEATH OF MOTHER FROM SEPTICÆMIA, TWENTY-FOUR HOURS AFTER OPERATION.

The patient was admitted at 10.20 P.M. on December 10, 1881, having been sixteen hours in labor. This was her second pregnancy, she having previously (September, 1880) aborted at the third month. She was a diminutive woman, forty-two inches in height and was in a weak state when admitted. The pulse was 96, and temperature 99.8° F. Tongue clear and the bowels had been opened. The pains were feeble and infrequent. The lower limbs exhibited extreme deformity from rickets, but the pelvic deformity was not recognized by the pupil midwife who had charge of the case. The resident medical officer examined the patient on his return to the hospital at 4.30 A.M., when he found the os uteri dilated transversely to the extent of 1½ inches, and the measurement of the conjugate diameter at the brim only 1½ inches. The following measurements were also taken: Between the trochanters, 11¼ inches; from the symphysis pubis to right anterior superior spinous process, 5¼ inches; ditto, left, 5¼ inches; external conjugate diameter normal (7 inches). Dr. Grigg was summoned, and after consultation with the other members of the staff, Cæsarean section was determined on.

At 2.30 P.M., December 11th, the patient was chloroformed, and Dr. Grigg, assisted by Sir W. MacCormac and Dr. Boulton, performed Cæsarean section and extracted a living child, which was 21½ inches in length and weighed 6 lbs. 5 oz. The placenta came away readily. The incision was six inches in length, extending from the umbilicus to half an inch above the pubes. Hemorrhage was controlled by pressure and by iced sponges applied to the cavity of the uterus and to the cut surfaces. That from the placental site was very slight, but the total hemorrhage was considerable, nearly a pint. The operation was not done entirely antiseptically; it was finished in Porro's method by removing the uterus, broad ligaments ovaries, and Fallopian tubes. The uterus was divided close to the internal os, and a double ligature was passed through each broad ligament and the ligament divided between the ligatured portions. The remaining portion of uterine tissue was tightly grasped by a wire écraseur, brought outside the internal wound, painted with solid perchloride of iron and kept in position by thick steel needles; the operation lasted an hour and the patient bore it well. Antiseptic dressings were applied. A subcutaneous injection of ether (one drachm) was administered and some brandy given by the mouth. Half an ounce of milk was then given by the mouth every hour until shortly before death.

At 11 A.M. on the 12th the temperature was 98.6°; respiration, 55; and the pulse, 60. The patient stated that she had passed a good night, and expressed a wish to see her baby. At 2 P.M. Dr. Grigg found the patient's hands cold, breathing rapid, and pulse almost imperceptible. This state of things had come on just as he entered the room. Up to that time the patient was cheerful and feeling very comfortable, only complaining of a sinking sensation at the stomach, and craving for food. Dr. Grigg then administered a drachm of brandy (in water) and directed more to be given with an ounce of beef-tea. This set up vomiting and the patient suddenly collapsed, and died at 3.30 P.M.

Necropsy (eighteen hours after death), by Dr. Allchin, Physician to, and Lecturer on Pathology at, the Westminster Hospital.

The measurements taken during life were verified on the cadaver.

The body was fairly well nourished, muscular, and of good color; rigor mortis well marked. There was extreme rickety deformity of the lower limbs. Externally, the wound appeared perfectly healthy; its internal appearance was also healthy. There was commencing primary adhesion to the omentum with a few specks of healthy lymph. There were some ordinary subperitoneal ecchymoses around wound. The intestines were distended and their peritoneal surface generally slightly injected—especially in the neighborhood of the wound, where some coils of intestine were glued together by lymph. There were a few old adhesions between the right angle of colon and the under surface of the liver. The peritoneal cavity contained a few drachms of blood-stained viscid purulent fluid.

The cervix uteri and sigmoid flexure were closely adherent by recent lymph, the cut margin of the posterior layer of peritoneum intervening and Douglas's pouch being thereby obliterated. A small quantity of lymph intervened between the anterior surface of peritoneum and the cervix. Stump deeply stained by perchloride. Extent of uterus left measured 2½ inches vertically. External os and vagina normal. The ligatures on the broad ligaments were intact. Ureters and rectum normal, with the exception of a small abrasion on the peritoneal surface of the latter. There were a few submucous ecchymoses in fundus of bladder, which was considerably displaced to the left, owing to obliquity of pelvis. A slight abrasion of urethra with adherent clot. No subperitoneal inflammation in pelvis. Liver small, pale, normal in appearance: weight 2 lbs. 5

oz. Kidneys and suprarenal capsules normal. Spleen soft.

A few old firm adhesions over lower part of right lung; general firm adhesions over left lung. No fluid in either pleura. Lungs healthy and crepitant throughout.

Pericardium contained two drachms of clear fluid. Heart substance firm and of good color. Weight of heart, eight ounces. Cavities moderately distended with firm post-mortem clots, not extending into vessels. No post-mortem staining of endocardium.

Remarks (by Dr. Grigg).—This is the first complete case of Porro's operation performed in England, *i.e.*, the removal of the uterus at or just below the internal os with the entire uterine appendages. On reviewing the case the following points are of practical importance, and if I have occasion to perform the operation again, I shall bear them in mind.

Firstly, not to extend the incision into the uterus too low, and not approach the internal os by at least two inches, as the hemorrhage was but slight from the upper zone of the uterus, but very profuse from the lower portion. The danger arising from cutting into the placental site is more theoretical than practical, as when once the incision is made, the removal of the uterine contents is almost instantaneously effected, and the application of iced sponges to the uterine cavity at once excites contraction and arrests the hemorrhage from the placental site.

The second point of importance is the question of applying clamps to the broad ligaments before making an incision into the uterus. This was suggested to me and advised by Mr. Knowsley Thornton; but in practice this is not possible without making a very large abdominal incision and drawing out the whole uterine tumor, as there is not otherwise a sufficient space to apply any clamps to the broad ligaments. The uterine cavity must be emptied first of all before proceeding to clamp the broad ligaments. I should strongly recommend the immediate application of clamps to the broad ligaments on the removal of the fœtus, even before delivering the placenta. By this proceeding much loss of blood would be avoided. Besides, this would obviate the necessity of ligaturing both distal and proximal sides, which prolongs the operation.

The difficulties met with in dissecting the bladder and rectum off the uterus are not so great in an impregnated uterus as in an unimpregnated one—nor is there such a likelihood of injuring the ureters.

Since reading the results of Sir William McCormac's case of removal of the entire uterus (*British Medical Journal*, January 14, 1882, page 61), the question arises in my mind whether it would not be desirable to remove the wire ligatures from off the cervix after first of all searing the stump of the cervix with the hot iron. The post-mortem showed that the application of the solid perchloride of iron is not without danger, as the vessels were stained for about two inches beyond the wire ligatures, although the wires were drawn as tight as the wire would bear. A free opening into the abdominal cavity, to admit of free drainage, is, judging from he above case, desirable.

Finally, as regards the feeding of the patient, should the system of feeding adopted with so much success in ovarian cases be used also after this operation? I am inclined to think not, the blood conditions not being similar. More food is necessary. I should, however, to avoid sickness, feed by the bowel in preference to the mouth.

Should I again have to elect between Porro's operation and Cæsarean section I should decidedly, from my own experience, give the preference to the former, and feel sure, from the course of this case, that the former offers the best chance of life to the mother.

DEATH FROM UMBILICAL HEMORRHAGE.

The following case recently occurred in the private practice of a London obstetric physician: After the birth of the child the cord, which was unusually stout, was ligatured with thread as usual, two or three inches from the umbilicus, a surgical knot being tied, and then divided about an inch from the ligature. The cord continued to pulsate, a fact to which he directed the nurse's attention. In about seven minutes the mother flooded and the child was wrapped in flannel and laid on one side. In about twenty minutes, when the flooding had been controlled, the child was looked at and found to be lying dead in a pool of blood. The ligature was still firm. The inference is that it must have been placed over a nodosity of the cord and must have slipped on to a portion of smaller calibre, and thus became slightly loosened. This case would tend to show that to dispense with the ligature altogether, as some German writers have advocated, is a plan not without danger.

The Use of Mercury and other Remedies in the Treatment of Syphilis.—Dr. G. H. Fox, of New York, has published some views on the therapeutics of syphilis that are the results of an extended experience. He first lays it down as an axiom that mercury is our most valuable remedy, but hastens to add, as a corollary, that its value has been overrated. Some of his worst cases of chronic syphilis have been those in which mercury has been given persistently for one or two years; in this connection the value of hygiene and tonic measures are strongly urged upon the profession. Syphilis, in his opinion, tends to a spontaneous cure, at least in the majority of instances, and in most acquired forms is far less malignant than is usually supposed. Many cases will progress satisfactorily to a cure without mercury. Of all the various methods by which mercury may be introduced into the system, that by internal medication has advantages over others by inunction, baths, or hypodermic injection. No locally irritant action should be permitted, and indeed the doses may be so small as not to give the slightest danger of salivation. The duration of treatment should be related to the severity of the case and the success that attends the therapeutical measures.

Iodide of potassium has also a positively curative effect in syphilis, though excellent authorities may oppose this view. It does its work quickly or not at all. In this connection he urges attention to the danger that attends the use of large doses, and observes that he has seen syphilitic patients dying in hospitals, where heroic doses of potash were hastening the fatal termination. Iron and cod-liver oil are useful adjuvants, the former especially as an astringent to counteract the laxative effects of mercury, the latter for the syphilities who have a strumous diathesis, or for late lesions that are unusually persistent.—*New York Medical Journal*, March, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, April 8, 1882.

FREEDOM IN CONSULTATIONS.

JUDGING from the criticisms in certain of our contemporaries concerning the recent action of the Medical Society of the State of New York, the time has come, apparently, for the profession of the Empire State to bow itself in the dust, to cry "Unclean! unclean!" and to beg for mercy. This state of things is the more to be deplored, perhaps, as the so-called sin was deliberately committed in the full light of reasonable accountability, and evidently with a proper regard for the responsibility which the adoption of a new code involved. In fact, the State Society has succeeded in creating a genuine sensation in several smaller medical circles, and protestations are bubbling over in resolutions condemning the course taken by this organization, and predicting possible medical excommunication for all its members. From these standpoints, the prospects are gloomy, indeed, and the medical men of this State are in need of some of the consolation which belongs to the discussion of the other side of the question.

It was hardly supposed, when the new code was adopted, giving freedom of action to every man regarding consultations, that there would be a lack of opposition to the movement by outsiders. Whenever an old rut is left and a new road projected, the first passengers generally have a rough time of it. They must expect this, and bounce over the old prejudices as best they can. In so far, perhaps, the State Society has, in a measure, come to a realizing sense of the radical character of its recent departure. But as yet there is no sign of weakening as to the stand taken. In reality, there is no good reason why there should be. Far from being in the wrong, the profession of this State have taken a much-needed step in advance. The cry that concessions have been made to irregular practitioners is simply absurd. The assertion that the honor of the regular profession has been sacrificed to the mere expediency of obtaining extra consultations is ridiculous. The profession of this State have a birthright which has never been for sale for any such price. The action regarding free consultation was based solely upon the principle that medicine was a broad and liberal profession, and that every barrier which interfered with the expansion of its usefulness and the increase of its influence should be broken down. The soundness of this doctrine cannot be questioned even by the most contumacious sticklers for the National Code. The best reason for rebuking bigotry and dogmatism is to be found in the fact that we are free from any suspicion of them ourselves. And this results when the opportunity is given to every one desiring it to search for truth wherever it may be hidden, and in his own way.

He is simply expected to settle in his own mind what it may be his duty to do in the premises, and personally assume the responsibility of its result. It is safe to presume that there is honor and intelligence enough in the profession to allow the details of action to take care of themselves. If thus much cannot be trusted to individual members of the profession, then no code is of any use.

Although the liberty of action was practically the same before, so far as the restrictions of the code were concerned, it was never so explicitly defined as now. For instance, there is really, even according to the American code, no provision to prevent consultation with so-called homœopaths or irregulars. That the clause referring to it is understood to mean otherwise must be admitted. Whatever may have been the reasons heretofore for inserting it, it is quite certain they do not apply to the present state of affairs. The provision in the American code to which we have referred is to the following effect:

"But no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession and of the aids actually furnished by physiology, pathology, and organic chemistry."

The educated homœopaths of the present day certainly do not come under this reference, nor, in fact, do the majority of the lesser lights who still trade upon the mere name of a sect. But further than this, a comprehensive interpretation of its supposed spirit is perfectly consistent with the action of the State Society. A sufficiently wide latitude is given for a choice, in consultation, between the honest man who, believing in certain methods of cure, is yet not exclusive in his views, and who is willing to drop sectarian principles; and the one who pins his entire faith on a single theory, who sees no chance for salvation beyond his own creed, and who, while pretending to believe in God, boldly declares that Mahomet is his only prophet. The latter apostles are either fools or knaves, and from either point of

view can never be met even half-way by sincere and earnest men. There is no danger that consultations with such men can or will be held by any respectable member of the medical profession in this State or anywhere else. Each man reserves the privilege of satisfying himself on these matters before he consents to take any step one way or the other.

Of course we hear all sorts of absurd things concerning the desertion of the old flag, of going over to the enemy, of acting in defiance of all the principles of right and justice regarding professional associations, and of doing many other terrible things tending to encourage quackery. But in reality the State Society has only done a common-sense thing. It merely states that any medical man who chooses to act according to his best judgment in consultation with any honest practitioner whatsoever can do so without being subjected to discipline for such opinion's sake. He is not recommended to consult with any one whom he may consider an improper person; he can refuse to consult with any one, regular or irregular, if he pleases so to do. No effort is made, directly or indirectly, to do aught to recognize quackery in any of its forms. Certainly the honor of the profession can as safely be trusted, perhaps, in the working out of this apparent problem of requisite qualifications for consultation as in a blind obedience to the dicta of any committee on ethics.

The principle advocated is certainly proper and just. It lies at the very foundation of our most treasured privileges as citizens and men. Its proper and consistent application to the wants of a progressive and liberal profession cannot be at fault. There is every excuse for being on the side of advanced opinion, freedom of thought and independence of action, even at the risk of showing our enemies and carping critics that there was some chance of improvement, even with us, who heretofore believed ourselves perfect in all things. Truth will doubtlessly be vindicated in the end. The public will give us due credit for sincerity of purpose. At least there is now less reason than ever on their part of stigmatizing the regular profession as an uncompromising trades-union.

We repeat that the Medical Society of the State of New York has done nothing of which it may be ashamed. It can take nothing back, so far as freedom of consultation is concerned. The stand taken is an eminently proper one, and we hope it will be persistently maintained, even at the risk of non-representation in the American Medical Association. It will, in any event, be only a question of time for the Association itself to follow the example of the Society of this State.

The free and progressive spirit of medicine can no more be trammelled by foolish restrictions as to the conduct of its members than can its grand principles be made to revolve upon doctrinal points, or its legitimate aspirations be controlled by mere sectarian influences. The religion of medicine is as broad as humanity itself, and should compass it at every point; its faith, founded on facts in science, should reach out in every direction for new strength; and its mission to cure the sick should not stop short of the use of every means within honest reach. The darker the places beyond, the higher we should raise our torch, and the more persistently and earnestly should we press forward. The Medical Society of the State of New York has striven by its recent action to give such a doctrine its most liberal interpretation, and such a faith its most practical turn.

THE WAR AGAINST ADULTERATIONS.

THE constant inspection of foods and drugs by Governmental authority has now become a fixed policy in most European countries. In Germany over a quarter of a million of samples are sometimes analyzed yearly, with the result of obtaining some three or four thousand convictions. Great Britain shows its commercial instincts by its still more extensive adulterations. In 1879, among 16,772 samples examined, 2,978 adulterations were found.

The war against this species of fraud in our country has shown itself in the attention paid to the subject by our Boards of Health. These organizations nearly always discuss the matter in their annual reports. The State Board of Health of New Jersey has established a Council of Analysts to whom the investigation of adulterations is referred. This Council has made a report which evinces rather more labor than is usually shown.

It may be of interest to summarize some of the results obtained by the examinations of these New Jersey chemists.

The teas examined showed the adulteration, in two out of ten cases, by foreign leaves. Exhausted leaves were also frequently found.

The coffees in the whole berry were found to be pure. Coffee "essences," however, contained no coffee whatever, but were made of licorice, chicory, and caramel. Ground coffee, in almost all cases, contained chicory, corn, beans, potato, or rye.

Loaf and granulated sugars contained no glucose. Brown sugars and syrups, however, contained from ten to thirty per cent. of it. The candies examined were mostly of glucose. About one-third of them were adulterated with starch.

It should interest housekeepers to know that in all the twelve samples of sago and tapioca examined, no sago or tapioca was found, but only corn and wheat starch.

The investigations into the quality of spices gave about the usual results. Almost all of them are adulterated; corn starch and wheat flour being the usual foreign admixtures.

Vinegars were found to be purer than is usually

supposed. Pickles, however, in almost all cases, contained copper. The "uncoppered" pickle is distinguished by being of a yellowish color, while the others are green.

We referred, some time ago, to a possible source of danger to households in the use of canned goods. In most cases very small amounts of tin and lead are found in these preparations. In a quart can of asparagus there were over four grains of dissolved tin with very evident traces of lead. In canned tomatoes there were also found marked evidences of tin and lead, the latter evidently coming from the solder. There were not enough examinations made to allow of any positive statements to be made regarding the danger from canned foods. It is probable that some varieties of vegetables act much more powerfully than others upon the tin.

The subject of the adulteration of Jersey milk occupies a large space in the State report, and is too vast for discussion here. The New Jersey farmer has gradually grown into the accentuated consciousness that he possesses a sacred right to do two things —water his milk, and sell his vote to the railroads. These two privileges, together with his unshaken faith in Presbyterianism, form the tripod upon which rest the State's temporal progress and spiritual well-being. New Jersey milk, if conscious, would feel an uneasy sensation of neglect if not diluted, like an infant robbed of its morning bath. The pump is more to our neighbor milkman than drink; and as long as every one cannot be a bank cashier, he will, we fear, stick to this next best source of revenue. The New Jersey Board of Health find that nearly all samples which they examined at first were watered. They have secured some temporary improvement, but only that.

But we trust that the war against this and other adulterations will still be kept up. Success is, unfortunately, most needed where it is most difficult to secure it.

THE SUPERVISION OF PRIVATE MAD-HOUSES.

A CASE has recently been brought before the Pennsylvania courts which is instructive both as regards the regulation of medicine and the protection of the insane.

It appears that there is in Philadelphia a certain Dr. Livingston, who keeps what he terms a "Home" for the treatment of the insane. One branch of his establishment was put in charge of Mr. E. M. Clifford, a man with neither a licence nor a medical education. Complaint was recently made against him for practising without a diploma, contrary to law. He was also charged with maltreating and drugging some of his patients. He is to be tried for the illegal practice of medicine, and it will be a satisfactory precedent, if, as seems probable, he is convicted.

But another important fact was developed by the arrest of the man Clifford.

At the "Home" of which he was in charge, a number of the insane were confined and entirely deprived of their liberty. This was done without there being required any previous certificates of lunacy from examining physicians. And it appears that the Pennsylvania law so reads that certificates are not necessary for the incarceration of lunatics, or supposed lunatics, in private homes. If a person wishes to put a troublesome relation in a private mad-house he has only to get the permission of the proprietor. This latter gentleman can say that his institution is a home, and the law cannot interfere.

The Philadelphia press justly complains that the law, if it can really be interpreted as above, is defective, and leaves a way open for great abuses.

In this State the law provides for such institutions, and requires a medical certificate of insanity before any person can be secluded in any public or private institution, home, or retreat for the insane.

It would be well for other States to inquire whether their laws have not the same defect as those of Pennsylvania.

EXTENDING THE ORGANIZATION OF CHARITY.

THE attempts to organize charitable work in Boston, Philadelphia, and this city are not only bearing fruit directly, but their example is stimulating interest elsewhere. The good work is extending, and we are glad to learn that Newark has recently undertaken it. A Bureau of Associated Charities has been organized in that city upon much the same plan as that adopted here.

The objects of the association are to secure the co-operation of the churches, benevolent societies, and individuals of Newark in the work of relieving the poor.

But the Society also aims to do the more positive work, such as is undertaken in this city by the Society for the Relief of the Poor. It will try to diminish begging and pauperism, to encourage thrift and self-dependence.

The organizers of the Society show good sense in announcing certain limitations to their work. Thus, it will neither solicit nor receive funds for the purpose of almsgiving, and it will be entirely secular in its work.

If any society can be effective in teaching people to dislike dependence and to pay for services rendered, medical men will feel grateful toward it, from motives not entirely philanthropic, nor yet entirely selfish. After the pauper himself, the doctor perhaps suffers as much as any class from the misuse of charities and the spirit of pauperism inculcated by ill-judged benevolence.

THE CURE OF WRITER'S CRAMP AND ALLIED DISEASES.

Some months ago a story was going the rounds of the medical journals to the effect that a Mr. Wolf, a writing master, had discovered a cure for writer's cramp. At Paris he cured several cases taken from Charcot's clinic, and they were reported by Vigouroux in *La Progrès Médical*. It now appears that the originators of the method employed by Wolf were two physicians, brothers, Drs. Thos. and Aug. Schott, living in Bad-Nauheim. Dr. Thos. Schott has recently written (*Deutsche Medizinal-Zeitung*) an account of his method, which he says he taught to the writing-master referred to some three years ago.

The Schott treatment consists in a carefully applied series of active and passive gymnastic movements, combined with nerve- and muscle-massage.

The passive gymnastics are done by the patient alone. The fingers, hand, forearm, and arm are each separately and carefully put through every movement possible for from six to twelve times. After each movement there must be a moment of rest. The duration of the exercise is from twenty to forty minutes.

The active gymnastics require the help of another person. Each separate muscle is again brought into action, but at the same time an opposing force is used by the attendant. Thus when the forearm is to be flexed on the arm, the attendant places his hand on the patient's wrist and makes a steady and even pressure until the flexion is complete. And so for the rest of the muscular movements.

Great stress is laid upon the muscular contraction and its opposing force being slow, steady, and even, from beginning to end. The duration of these movements should be about the same as in the passive gymnastics. They should be repeated two or three times daily.

The massage is applied to the nerves first, then to the muscles. The nerve-massage consists in stroking the skin over the course of the radial, ulnar, and median nerves as high up as the brachial plexus. The strokes should be at first soft, then gradually stronger, then soft again.

In the muscle-massage the rubbing should be firmly done, but without great pressure.

In both kinds of massage there should be no pinching or heavy pressing, and the strokes should be made centripetally.

Dr. Schott says that permanent cure cannot be induced in three weeks, but that it will in almost all cases result within six to eight weeks. His practice has been chiefly with the cramps of piano-players and of writers. Those occurring in telegraph operators, violin-players, needlewomen, etc., he has had no experience with, but he believes that equally good results would follow the use of his method in all forms of the disease.

The Schott treatment is new only in detail. Its usefulness in many cases seems undoubted.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 8, 1882.

Dr. Edward C. Seguin, President, in the Chair.

Dr. George L. Peabody presented specimens removed from the body of a man thirty-seven years of age, who presented the usual symptoms of chronic diffuse nephritis, together with evidence of dilatation of the heart. The heart showed

ECCENTRIC HYPERTROPHY WITHOUT VALVULAR LESION.

The organ weighed seven hundred and fifty grammes (twenty-five ounces), and the left ventricle was much dilated. The explanation of the condition of the heart suggested by Dr. Peabody was that it was primarily cardiac hypertrophy, occasioned as the result of chronic Bright's disease; that the dilatation was secondary, possibly due to some acute disease of the heart, and took place toward the close of life. Microscopically the muscular fibre exhibited a large amount of fat, more abundant, however, upon the left than upon the right side. The aorta was in the condition of advanced atheroma.

The *lung* presented was interesting, because it showed the lesions of

PIGMENT INDURATION,

which were illustrated by microscopic sections. They exhibited hypertrophy of the walls of the air-vesicles, dilatation of the capillaries, and abundant deposit of pigment in the epithelium.

The *kidneys* were evidently the seat of

CHRONIC DIFFUSE NEPHRITIS.

The cortex was thinned markedly; the markings were obscure. The surface was granular, and microscopic sections showed hyaline cast material in the tubules, atrophy of the Malpighian bodies, complete in some places, incomplete in others, and a granular condition of the epithelium in all the tubules.

The *liver* illustrated pigment induration in the area surrounding the central vessels of the lobules.

The *spleen* contained the remains of two old infarctions.

PRIMARY SARCOMA OF BRAIN.

Dr. Peabody also presented a specimen, accompanied with the following history: J. W——, fifty years of age; English; married; bookkeeper; was admitted to the New York Hospital October 2, 1881. Says his parents died suddenly, both having been found dead in bed. They had nine children, of whom only one is dead, he having died of some liver disease. The others, excepting the patient, are healthy. Patient admits having had gonorrhœa once, but emphatically denies syphilis. Has been a drinker of beer and whiskey. Had erysipelas in childhood, which accounts for certain scars on one of his legs. Has never had rheumatism. Gives no history of renal, pulmonary, or cardiac disease, or of injury.

Last winter, after a shower-bath, he experienced a sense of numbness in the left foot, from the great toe to the ankle, which persisted for some time. In the early part of this year he felt somewhat run down in general health, but with no very definite symptoms. For this he travelled. Last June (four months ago), in the early morning, while still in bed, he had, on

awaking, a dull pain about the left hip-joint and a sensation as if all were gone below that on the left side. Unable at this time to move the left leg. Soon thereafter there began a spasmodic up-and-down jerking of the whole pelvis, excruciating pains in the left foot, leg, and thigh, and sudden violent clonic spasm of the whole left lower extremity (the thigh being suddenly and completely flexed upon the abdomen). The pain then seemed to creep up to the left arm and to the neck. After this he lost consciousness, and remained unconscious for an hour. On regaining consciousness there was no aphasia, but the tongue was terribly bitten. After the attack he regained completely the power in his limbs.

The patient then remained in good health up to two or three weeks ago, at which time, under the same circumstances and surroundings, he had a second attack, which differed from the first only in that he did not lose consciousness and did not bite his tongue. He regained power on the same day and went to his place of business as usual. Six days ago he had a third attack, exactly like the second, except that it began by clonic spasms in the left arm. During the next two days he went to his business. During the following two days he was just able to drag himself about. After this time he had to give up, being able to get out of bed only with assistance. Loss of muscular power has daily deepened.

There has been no cincture pain, or sphincter trouble, no pain in the head and no aphasia; also no urinary or alimentary disturbance.

On admission, pulse, respiration, and temperature are normal. He is fairly nourished. There is no œdema, no loss of cutaneous sensibility, considerable, though not complete loss of power in left upper and lower extremities. Trial with dynamometer shows left hand, 0; right hand, 80. Reflex on irritating sole of left foot is diminished, though present. There are no ocular symptoms, no deviation of tongue. Heart, lungs, liver, and spleen seem normal.

During the month following his admission, he had at intervals of a few days, marked convulsive movements of the left side of his body and extremities. He was during this time given only bromides of potassium and ammonium, with an occasional small dose of morphine. It was noticed that after each of these spasmodic attacks the patient would lose temporarily the little remaining power of his left extremities for several hours.

At the beginning of his second month in hospital, November 19th, he was given mixed treatment, which consisted of hydrarg. biniodid., gr. $\frac{1}{6}$, and potass. iodid., gr. x. This was given three times a day. During the month of November there was no marked change in his condition. The muscular spasms became rather more frequent and his general nutrition suffered perceptibly. Up to this time there had been no headache.

Early in December his convulsions became more severe and more general, and then for the first time since he came under observation they were accompanied by periods of complete unconsciousness, which lasted several hours. At this time, too, he began to complain of intense pain over the right hemicranium.

Occasional rigidity of the right half of the body was now noted.

On December 17th it was noted that the right half of his body was quite stiff, and that spasmodic contractions of the muscles of the right hand and forearm occurred. The face was distorted and drawn to the right, and the tongue deviated toward the right. The patient lay in a dull, lethargic condition very much of the time, but could be roused to answer questions about himself. He passed urine and fæces involuntarily. There was no strabismus. From time to time now his temperature became elevated to a slight extent, never reaching 101°. On December 20th he became comatose and his temperature rose to 104.1° F. From this time his temperature steadily rose until he died comatose, of heart failure, at 10.30 P.M. on December 21st, with a temperature of 108.7° F.

Autopsy twelve hours after death. Body emaciated. Rigor mortis well marked, no œdema. There are superficial scars on the external aspect of left leg—none on the penis or elsewhere. The following measurements of the limbs were made: Circumference of thigh at middle—right, 14½ inches; left, 12½ inches; circumference of legs four inches below patella—right, 10¾ inches; left, 10¼ inches; circumference of arms at middle—right, 8¾ inches; left, 7 inches; circumference of forearm 3 inches below olecranon—right, 8¼ inches; left, 7½ inches.

Rigor mortis was less firm on left side. There was a small superficial bed-sore over the upper part of the sacrum.

Brain.—There was marked flattening of the convolutions generally, which was more marked on the right side. The pia mater was whitened and thickened, and firmly attached to the dura over the posterior part of the first frontal convolution on the right side. After removing the brain from the calvareum and placing it upon its base it was noticed that the left hemisphere fell away from the median line, partially collapsing as usual. The right hemisphere did not collapse at all, its highest point (fissure of Rolando) being on a plane three-fourths of an inch higher than the corresponding point of the left. There was a bulging of the anterior two-thirds of the right hemisphere inversely across the median line. There was distinct fluctuation obtained over the anterior half of the right hemisphere. The brain was then put into chromic acid for hardening, it being merely noted in addition that the arteries at the base are normal.

On subsequent examination of the brain, a tumor was discovered in the right hemisphere, ovoid in shape, with a long antero-posterior diameter of two and one-fourth inches, and a short diameter of one and one-third inch. It began posteriorly in the white matter just at the terminal portion of the fissure of Rolando, and lay beneath the upper half of the ascending frontal convolution and the posterior part of the first frontal convolution. It had invaded and destroyed much of the gray matter of these two convolutions, but did not seem to have reached any other gray matter.

Microscopically the tumor was found to be made up chiefly of round cells with some spindle-cells in a very fine fibrous stroma, and without any special arrangement. He placed a section of it under the microscope and it was seen that the only feature of interest, in addition to those mentioned, was that it contained many blood-vessels, some of which were of large size. It was to be considered, therefore, a sarcoma. The other viscera were substantially normal.

THE PRESIDENT remarked that Dr. Peabody's specimen of tumor of the brain was a valuable contribution to localization. It was situated in nearly the same location where he had found a tumor in two or

three cases, with corresponding symptoms. The tumor occupied the upper part of the motor area, involving, to a certain extent, the paracentral lobule, and he thought, from the epileptiform attacks in the left foot and leg, that the tumor began at that point and extended anteriorly.

Not many months ago he met with a central tumor, and the patient had dragging of the right foot for several months, afterward right hemiplegia, and still later epileptiform attacks upon the left side with no aphasia, and there was carcinoma of the ascending frontal and parietal convolutions near the longitudinal fissure. In that case there was no lesion of the optic nerve.

CONTRACTED MEATUS URINARIUS AS A CAUSE OF SPASM AT THE NECK OF THE BLADDER, CYSTITIS, AND HYDRONEPHROSIS.

Dr. F. N. Otis presented the urethra, bladder, ureters, and kidneys removed from the body of a man, fifty-five years of age, who had suffered constantly for more than twenty years with frequent, difficult, and painful micturition. The patient stated that his troubles began with a gonorrhœa, from which he did not suffer very much during the acute stage, but chronic urethritis lasted for a long time, and finally the bladder became affected; but during the last five or six years his trouble had been chiefly urethral. He took various internal remedies, and was also treated for stricture. When he first suffered from frequent urination, which after a time became painful, he was treated for cystitis, and finally stone was suspected on account of the intractability of the vesical symptoms. He was under the care of Dr. Metcalfe, and when the case seemed to be more surgical than medical it was turned over to Dr. Van Buren, who examined, and failing to detect any stone in the bladder, regarded it as a case of cystitis arising from disturbed sexual hygiene among other things, and kept up by causes of that character, and he treated the patient by making local applications to the bladder and the use of internal remedies. This method of treatment was continued for a number of years, but the difficulty was not materially benefited—sometimes better, at other times worse. The frequency of urination and the pain continued. The patient next went to Europe and was under the care of Sir Henry Thompson, who examined the bladder for stone, but found none. It had been suspected, on account of pain in the region of the right kidney, that a calculus existed in the pelvis of that organ, and that view was sustained by Sir Henry.

From London the patient went to Paris and was under the care of Civiale, who gave him such a thorough examination for stone in the bladder that he was unable to leave his bed for two months, but found none; nor did he find any condition of the bladder which accounted for the difficulty of urination.

Failing to get relief in Europe the patient returned to New York, and went the rounds among the regulars and the irregulars, proprietary medicines, spiritualists, etc., and at last came again under the care of Dr. Metcalfe, who treated him in a general way for a number of years. The only relief, and this was partial, which he obtained came from the occasional introduction of a sound—25 mm. Fr. passed readily—into the bladder, and in the meantime he was seen by several men and was the subject of a variety of diagnoses.

When Dr. Otis saw him on December 30, 1881, he was feeble, emaciated, and tremulous, and he had recently suffered from chills, followed by fever and sweating. Urination occurred about every fifteen minutes, and was attended with the most intense agony. The pain was referred chiefly to the neck of the bladder, somewhat over the pubis, and in the perineum, but no pain anywhere else. His urine was habitually more or less purulent, but there was nothing in it to indicate organic disease of the kidney or bladder. The patient had had one or two attacks of pain referred to the left side, thought to be renal colic, but Dr. Otis was unable to detect any tenderness in that region. The penis was 3¾ inches in circumference, and had a urethral orifice of thirty-five.

On examining with the urethrometer, he found that the urethra measured 37, and there was a contraction nearly one inch from the orifice to 25 or 26, and as the instrument was brought out it indicated 35.

Having seen cases where such an amount of contraction produced spasm, prolonged cystitis, and difficulty of urination, extending over a period of eight or ten years, as proved by the relief of such trouble upon the division of such an orifice, he proposed to divide the orifice and make it correspond with the urethra behind it. The patient was etherized January 1, 1882, and Dr. Otis made the necessary division, so that a No. 37 solid steel sound passed by its own weight into the bladder, demonstrating the entire freedom from stricture at any point.

For nearly four days after the operation he was entirely free from pain referable to the bladder or penis, but there was complete incontinence of urine. During this time he had occasional attacks of what seemed to be renal colic.

On the fourth day he began to have some control over the passage of urine, and in the latter part of the same day there was slight pain, which increased as the control over the urine increased; yet, it never recurred to the degree it existed before the operation.

Suddenly, on the fifth day after the operation, and for the first time, he complained of pain in the head of his penis, and immediately a series of spasms occurred like those from which he had previously suffered, and continued at intervals of ten or fifteen minutes. After two days he began to show some symptoms of uræmia, and on the fourth day after the occurrence of the pain, attributed to the sudden appearance of a stone in the bladder, he passed into coma and died.

The autopsy was made by Dr. William H. Welch, who furnished the following report:

"By request only the abdominal organs were examined.

"*Kidneys.*—Both kidneys are enlarged. The fibrous capsule is adherent to the surface of the organs. The cortical substance presents a grayish, nearly uniform appearance, with little trace of the normal markings. The pyramids are in great part encroached upon by the dilated calyces. No abscesses are present in the kidneys. The pelvis and calyces of each kidney are greatly dilated and contain turbid ammoniacal urine. The ureters are likewise dilated, so that their calibre equals nearly that of the small intestine. The walls of the ureters are thickened. No obstruction to the passage of urine exists, either in the pelvis of the kidneys or in the ureters.

"*Bladder.*—The wall of the bladder is thickened to about four times its normal diameter. The thicken-

ing affects all of the coats of the bladder, but especially the muscular tissue. The mucous membrane of the bladder is thickened and presents, in many places, especially about the base, slight elevated, grayish, discolored patches, such as are seen in so-called diphtheritic cystitis. The capacity of the bladder is about that of the normal organ. Its contents are ammoniacal urine and a small calculus. This calculus is about an inch in length and conical in shape, resembling somewhat a canine tooth. Such a calculus might have been formed in one of the dilated renal calyces. The calculus is apparently of recent formation, being very friable, and composed wholly of phosphates, without a nucleus of uric acid or oxalate of lime, as shown by chemical examination.

"*Urethra and prostate.*—The prostate is of about the normal size, and had not occasioned any obstruction so far as could be detected. The calibre of the urethra seemed to be normal, presenting no evidence of stricture.

The *spleen* is somewhat enlarged and surrounded by firm fibrous adhesions. The liver, stomach, and intestines present no noticeable change. The microscopical examination of the kidney showed a marked new growth of fibrillated connective tissue, which is infiltrated with lymphoid cells. The uniferous tubes are, in places, compressed and atrophied, in places dilated, in places filled with fatty epithelium.

"*Diagnosis.*—Chronic cystitis with dilatation of the ureters. Hydronephrosis and chronic interstitial nephritis. The cause of the cystitis is not apparent."

Remarks.—Dr. Otis thought that in absence of any other cause, absence of obstruction of any kind to account for the thickened bladder, the dilated ureters, and the hydronephrosis, we must be permitted to suggest the possibility of all the difficulty having been produced by spasm reflected from irritation at a distant part. The case was strictly in line with cases which he had presented to the profession before, cases where cystitis, frequent urination, spasm at the neck of the bladder had continued for a long time, and apparently the only difficulty to which these symptoms could be attributed was contraction of the meatus urinarius, not greater than in the present case, and the proof that the supposition was correct was found in the disappearance of the trouble immediately after division of the contracted orifice.

The stone presented was evidently of recent existence in the bladder, and it could be readily seen how it applied itself to dilated calyx upon the left side nearest the ureter. Dr. Otis thought that the stone came down into the bladder at the time the patient first suffered from pain in the head of his penis, and from that moment a series of spasms came on which terminated in the uræmia that caused death.

(To be continued.)

Removal of Plaster-of-Paris Bandages.—Dr. F. H. Murdock, of Bradford, Pa., says: A very convenient way to remove a plaster-of-Paris bandage is as follows: Take a strong solution of nitric acid, and by means of a camel's hair pencil paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster that it may be readily divided by means of an ordinary jack-knife.

ACADEMY OF MEDICINE, CINCINNATI, O.

Stated Meeting, February 20, 1882.

Thad. A. Reamy, M.D., President, in the Chair.

Dr. William Judkins read an interesting essay on

ASPIRATION OF THE KNEE-JOINT (see p. 370).

Dr. Whittaker remarked that though the subject presented this evening was of a purely surgical nature, the question of aspiration also belonged to medicine as well, and he therefore hoped to be excused for discussing the subject of aspiration in general. The honor of first having brought aspiration to the notice of the profession properly belongs to Dr. Bowditch, of Boston, who reported two hundred and fifty operations for pleurisy previous to the year 1870. A few years later, 1873, Dieulafoy brought out an improved apparatus for aspiration, and from that time, stimulated by the enthusiasm of the inventor himself, the practice of aspiration for fluids in the different cavities of the body, including even the skull, became more general. Dieulafoy attracted special attention by his success in treating irreducible hernia, when he claimed to have reduced twenty out of twenty-seven cases, according to this plan. The success of the aspirator is a striking example of the necessity of some tangible means of illustration before a practice will be universally adopted. It was the same thing with auscultation and percussion, which, though recommended for years previously, was not adopted by the profession at large until the stethoscope and percussion-hammer were introduced.

Aspiration belongs to the greatest triumphs in modern medicine, notwithstanding the opposition it has met with from different authors. Fox, especially, proclaimed against this operation in pleurisy in the last four years, and his objections attracted considerable notice on account of its apparent dangers as pointed out by him. Subsequent testimony, however, disproves this view. The most frequent use for the aspirator in medicine is for pleurisy, when the relief by aspiration is immediate, devoid of danger, and frequently not attainable by other means. In acute pleurisy, aspiration ought to be made after three weeks. In pericardial effusions the aspirator is also of infinite value, as it establishes the diagnosis as well as serves as the best means of therapy.

Surgeons have been rather slow in adopting aspiration for effusions into joints. It is, therefore, most gratifying to hear that American surgeons did so much to introduce this operation in these regions also; foreigners seemed to have generally incised the cavities of joints and washed them out. This procedure is connected with danger to the joint on account of the admission of air, which is obviated by the use of the aspirator. The joint that seems to suffer most from the accumulation of fluid is the knee. The speaker never had an opportunity to perform the operation in hydrarthrosis; he had once a case where he was very anxious to aspirate, but consent was not given. Thinking that the habitation might have something to do with the chronic rheumatic affection, he suggested to the patient a change of residence, after which the effusion disappeared in two weeks, never to return. He also remembered a case of gonorrhœal rheumatism of six months' duration. This patient also refused aspiration, whereupon the speaker applied the constant electric current and the disease disappeared. This

is surprising when it is considered that gonorrhœal inflammation of the knee-joint is usually ranked as the most obstinate. It is now generally admitted that gonorrhœa is pyæmic in character, caused by the absorption of the poison after the primary acute symptoms have subsided. But joint affections may come on after any acute infectious disease, as typhoid fever, etc.

Aspiration ought to have a wider range of use than it has. Some years ago the speaker aspirated a bladder in a patient who suffered retention of urine from a fractured pelvis. This patient was a somnambulist, and had fallen out of a window during one of his attacks, fracturing the pelvis. The aspiration was made in the bladder twenty-six times.

Dr. Ravogli said he could not believe in a gonorrhœal arthritis. He had attended a venereal clinic in Italy many years and never saw a case of gonorrhœal inflammation of the joint. The disease is generally local, confined to a blenorrhagia of the mucous membrane of the urethra, and if there is simultaneously an inflammation of the knee it is only incidental. The rheumatism in such patients depends on other causes. As a class these persons lead an irregular life, drink wine and beer freely, etc. There can be no direct connection with the knee. A gonorrhœal orchitis occurs by transmission of the disease through the spermatic cord, it can even attain the kidneys, though this is rare, but has no direct connection with the knee-joint. As for aspiration it is not necessary in serous effusions. The serous membrane is very extensive and presents a large absorbing surface; iodine locally and a fixed immovable apparatus is sufficient to promote absorption. If the effusion last a long time a wire may be drawn through the synovial sac, by which the fluid may be drained off entirely, a closure being prevented by the presence of the wire. This method is not very painful and very effective. In purulent effusions it is necessary to be cautious on account of the dangers of pyæmia by the admission of air. It is therefore best to wait until nature decides the point of opening, and then a free incision should be made. The speaker objected to injections with carbolic acid solutions on account of the dangers of poisoning which may take place from absorption of this substance by the serous membrane. He had frequently seen symptoms of carbolic acid poisoning arise from the use of the spray in Listerism.

Dr. Whittaker replied that he must maintain that the existence of a gonorrhœal arthritis is possible. It is true there may be a coincidence of the two affections, and as such they were at first regarded; but the frequent occurrence of inflammation of the joint, with gonorrhœa, shows that it is more than a coincidence, namely, a sequence. Heart disease stood in the same relation to rheumatism until the connection was established by the frequent occurrence of these two diseases. Of course the possibility of any of these affections existing independently is not thereby to be denied. Some persons will have gonorrhœa without the consequent arthritic trouble, just as others will be subject to scrofula and yet have not the white swelling common in such persons. Arthritis is a common complication of pyæmia, and may depend on infection of a varying nature, and occurs in the history of certain infectious diseases. The speaker failed to see the connection of the ingestion of wine and beer with rheumatism in gonorrhœal patients; neither can exposure to cold always account for the rheumatism, as these persons are generally careful to guard against exposure. An irritation is conveyed to the joints in various ways. A gonorrhœal bubo depends on an infection through the lymph-channels. This, however, does not mean that we are to expect the same consecutive results as in syphilis. Even the mere introduction of a catheter may set up an urethral fever followed occasionally by arthritis. What the infecting cause may be is hard to say: perhaps micrococci that enter the blood or lymph-vessels in gonorrhœa, or are carried in by catheterization.

Aspiration is a trivial measure when compared with opening the joint by means of an incision. As for the introduction of a wire through the synovial sac, the speaker regarded it as an antiquated therapy, much more painful and dangerous than aspiration, liable to result in ankylosis just as well as the seton or silk thread, formerly used for that purpose.

Dr. Judkins, in concluding the discussion, said that the pain in effusions of the knee-joint, of an inflammatory character, is so excruciating that immediate relief is sought. This aspiration will give, as testified by Dieulafoy and many others after him. Compared with the aspirator the passing of a wire through the joint seemed to him also an unnecessary infliction of pain. The speaker had never used carbolic acid injections into joints, for fear of setting up a poisoning by the absorption of this agent.

CINCINNATI MEDICAL SOCIETY.

Stated Meeting, February 14, 1882.

Dr. G. Brühl, President, in the Chair.

Discussion of Dr. Wm. Judkins' paper upon aspiration of the knee-joint (see page 370).

Dr. A. M. Brown remarked that the propriety of aspiration, when it becomes necessary to open the knee-joint, is not to be questioned. It is not only the best, but the only safe mode of proceeding. But he thought it unnecessary to perforate the joint unless the contained fluid be purulent. His experience in the few cases he had treated led him to believe that non-purulent collections could be more successfully managed by the elastic bandage and fixation of the limb. The painful tension would be relieved and absorption be promoted by this course.

Dr. Schwazmeyer agreed with the last speaker that aspiration was not necessary unless the presence of pus could be shown, and narrated a case he had successfully treated by bandages and splint alone. This pain and swelling of the knee-joint was excessive, but the exploring needle showed clearly that the contained fluid was not purulent. To evacuate pus he thought aspiration the only method to be adopted.

Dr. Carr stated that he thought this operation to be one of great value; he had resorted to it in one case, and the result confirmed his belief. The case referred to was that of a child one year old with a suspicion of hereditary syphilitic taint. The knee was greatly swollen, and upon palpation gave every indication of the presence of fluid. Ten ounces of pus was drawn off by the aspirator and no untoward symptom followed. Dr. A. M. Brown saw the case at the time. In six weeks all trouble had disappeared from the knee. No ankylosis followed.

Dr. W. B. Davis thought this operation should be resorted to in all suitable cases, as it was proven by

the many reports cited by the essayist to be perfectly safe and very prompt in relieving pain.

Dr. Kearney remarked that he had had no experience in aspiration of the knee, but if upon further trial it should prove to be as safe as is claimed by the authorities quoted in the essay, it would undoubtedly be of great service, for the relief of pain is a most important element in the treatment of diseases of this joint. But in this, as well as in all other innovations upon established modes of practice, we have at first only the favorable evidence, only the successful cases have been reported. In a matter so grave as opening the knee joint we would do well to suspend judgment until the witnesses on the other side have been heard from.

Dr. C. P. Judkins remarked that he had no experience in perforation of the knee-joint, but thought a disposition was prevalent in the profession to resort to the use of the knife or aspirator for that purpose in many cases where a course less hazardous would be equally if not more successful. His experience in tapping hydrocele and the abdominal cavity led him to believe the trocar and canula just as safe as the aspirator. The inflammation after tapping a hydrocele is not the result of the operation itself, but arises from the irritating injections generally used. If a twenty-five per cent. solution of carbolic acid be injected the patient can go about his business at once without inconvenience.

Dr. John Davis remarked that while the reports collected by the essayist showed that aspiration of the knee-joint may be done often and with great relief, yet he thought there was risk, and so grave a matter as perforation should not be thought of when a cure could be effected by other means. In his practice stimulating applications and compression with constitutional treatment had generally proved sufficient. While he did not condemn the operation, he would not resort to it except in a case of very great urgency, where the presence of pus could be positively demonstrated. The Doctor then referred to two cases of perforation of the knee-joint which had come under his observation. The discharge was long-continued with frequently recurring inflammation, and final recovery with partial ankylosis.

Cathartics given Hypodermically.—Dr. G. Frommüller repeats a previous statement of his (*Memorabilien*, February, 1882) that the subcutaneous injection of Merck's aloin acts promptly and efficiently as a cathartic. He uses a solution of aloin in water (1-25). A passage from the bowels follows within three to five hours except in cases of obstinate constipation.

Solutions of extract of aloes are not efficient, as they are irritating locally. Concentrated decoction of senna leaves was tried by injection, but without favorable results.

Dr. Frommüller thinks the aloin injections will prove useful in cases of gastric catarrh or cancer; also in the insane and unconscious, and lymph-spaces, and thus to help the removal of inflammatory products. It is said by Dr. Klein to diminish intra-ocular pressure and to relieve pain. It is therefore helpful in certain forms of glaucoma and of ciliary neuralgia.

It is contra-indicated in acute inflammations or where there is great conjunctival or corneal sensitiveness.

Correspondence.

MEDICAL AND SANITARY NOTES ON THE FOREIGN SETTLEMENTS OF EASTERN AND SOUTHERN ASIA.

To the Editor of The Medical Record.

Sir: Settlements of the representatives of Western nations on the shores and rivers of Eastern Asia have greatly increased within the past few years. From Pekin to the most southern extremity of the Malay Peninsula they now number some twenty or more. The largest of these contain of "foreign residents" from two to five thousand, and the smallest from fifty to two hundred.

In all these we find medical men of more than ordinary attainments, many of whom are attached to hospitals for foreigners and natives. The Chinese Maritime Customs have a physician in all the treaty ports, who report semi-annually to its medical director (Dr. R. Alex. Jamison) the sanitary condition of their respective localities, and the diseases which prevail among both foreigners and natives. These are printed at the expense of the Chinese Government for gratuitous distribution. The material thus collected will soon be sufficient to justify some correct conclusions as to the medical geography of this quarter of the globe, the knowledge of which is at present exceedingly meagre and unsatisfactory. It is not our object at this time, however, to more than touch upon some points of this subject which may be of possible interest to the general reader.

The diseases affecting foreign residents in Eastern Asia necessarily depend greatly on the latitude and sanitary surroundings of their settlements.

Pekin, being open to the diplomatic representatives of the treaty powers and missionaries only, contains but few foreigners compared with the places to be hereafter mentioned. Being in 40° north latitude, the climate is one of extremes of heat and cold, as elsewhere in the same parallel. The rain-and snow-fall, however, is very light, the former being in a whole year little more than that of a single twenty-four hours in more southern latitudes. The diseases are those which belong to inland cities in the same latitude in other parts of the world. There is one hospital for natives, in connection with the London Missionary Society. Number of outdoor patients during the year 1877, 8,284; indoor for the same year, 20. Miss Dr. Howard, an American missionary, has also, I believe, a hospital for women in Pekin, and is doing some excellent work, especially among the higher classes of Chinese.

In addition to these, there is a refuge or asylum for opium-smokers, a report of which is before me. The number of indoor patients treated in 1878 and 1879 were 78 and 68 respectively; out-patients, 225 and 385 for the same years respectively. The institution is supported by voluntary subscription and the sale of pills claimed to have the effect of relieving or curing those addicted to the habit of opium-smoking. Curiously enough the report, though made by a medical man, does not give the composition of these pills. The success of the refuge is claimed to be encouraging and in many respects satisfactory.

In connection with the agitation now going on in the English Parliament on the opium traffic with China and a more or less general interest taken in the subject by philanthropists elsewhere, I have

taken some pains to make inquiries of respectable medical men in China as to the real extent of the evil. There appears no difference of opinion as to the widespread use of the drug by all classes of the people, and as to its steady increase. Especially is this the case among the wealthy and generally well-to-do. A pipe of opium is to the Chinese host what a glass of sherry is to the Western gentleman, and is offered to guests in the same way—as a sign of hospitality. In a word, opium-smoking is in China what dram-drinking is in England and America, no more nor no less.

Their degrading and demoralizing effects are not very different, though, of the two, opium-smoking is the least, as it simply renders its victim harmless and inoffensive, and leads to crime only as a means of obtaining the drug to satisfy the appetite for it. The horrid picture of emaciation of its victims, as is often represented, is not the direct effects of the drug, but of insufficient nutrition or starvation, as a man who is able to pay for both food and opium presents no such appearance.

Some curious results have been obtained by Dr. Ayres, colonial surgeon of Hong Kong, in the treatment of prisoners who are the victims of opium-smoking. He finds that the sudden and complete withdrawal of the drug from old and even confirmed opium-smokers, is not, as a rule, attended with the fearful consequences it is supposed to be, and that a restless night or two is all that is suffered from, though the subject may have declared that he would certainly die without it or some substitute for it. The following experiment was made by Dr. Ayres with a number of opium-smokers, who claimed to be good judges of samples of the drug. A given specimen was divided into three equal parts. From the first all the morphia was extracted, the second was left in its original state, containing seven and one-half per cent of morphia, and to the third was added seven and one-half per cent. of morphia, making fifteen per cent. This was all put in the little pots, or in packages, the same as when offered at retail. These three specimens were given to the smokers referred to, and after a fair trial all were declared to be *equally good*. Dr. Ayres admits that he is at a loss for an explanation of this, unless it is that the actual amount of the active principle of the drug inhaled by the smoker in all cases, is but a very small part of that which the gum contains. That quite a percentage remains in the ash is well known, and a further loss is probably sustained by the decomposition of a certain amount of the morphia from the action of the heat necessary to ignite the mass. In conclusion, the Doctor thinks that the evil effects of opium-smoking is much exaggerated. Indeed, he states *positively* that compared with opium-eating they are infinitely less. I find this to be the opinion of medical men generally all over the East. Also, that but few, comparatively of those that smoke are *excessive* in its use any more than are the wine-drinkers of the west, and that if its evils could be estimated, it would, as I have already intimated, be found *less* than that of the use of intoxicating drink elsewhere.

After this somewhat long digression, I will now resume my observations on medical and sanitary matters generally in the East. After Pekin, Shanghai is the next settlement of importance of foreigners on the China coast, and contains a population of 2,197 representatives of western nations, and 99,000 natives. It is situated on the delta of the Yang-tse, the Mississippi of Asia. Its sanitary surroundings are bad, and its water-supply can hardly be worse, though recently much money has been expended for its improvement. There are in this city eleven medical men in civil practice, six Irish, two Americans, two Germans, and one French.

There are five hospitals, one for foreigners alone, and four for Chinese. The total number of deaths among foreigners for 1880 was 78. Eight of these were from accidental drowning, 12 phthisis, 3 liver abscess, 10 diarrhœa, 3 dysentery, 1 cholera infantum, and 4 diseases of the heart. Miscellaneous diseases were the causes of the remaining deaths, though no more than two from any one of them. This is an exceedingly good showing, considering all the circumstances of the place and climate. It may be said, however, that most of the residents are in good circumstances, and if at all indisposed, go to health resorts up the coast or to Japan, and those suffering from chronic complaints return home, perhaps to die. The majority, however, if not falling positively ill, suffer more or less from the debilitating effects of the climate and require frequent and prolonged change. This is especially the case with women bearing children. The diseases peculiar to children appear more common than in Japan, thus diphtheria, measles, whooping-cough, etc., are not infrequent. Cholera sometimes occurs for four or five successive summers among foreigners as well as natives, though the cases among the former are usually few. Hong Kong, an English colony, between eight hundred and nine hundred miles farther south, is situated on an island, and contains about five thousand foreigners and two hundred and fifty thousand Chinese.

The climate of the place is semi-tropical and the air heavily loaded with moisture the greater part of the year. It has 4 hospitals: 1 government, 1 civil or municipal, 1 native, and 1 lock. The civil hospital is for both foreigners and natives. The native hospital is for natives alone, and the physicians and system of medical treatment are entirely Chinese. It is built of granite, and consists of two two-story buildings, a council hall, small-pox wards, and dispensary, and has accommodations for 100 men and 50 women. The yearly admissions are 1,700. It has an out-door department, with a daily attendance from seventy-five to one hundred. It is supported entirely by private subscription, and was originally built to take the place of what is called the "dying-house," *i. e.*, a place for Chinese to die in, as they have a great dislike to any one dying in their house, hence many during their last moments were taken out in the street to expire. Now they are taken to this place instead. Though there are ten physicians in attendance, the name "dying-house" is not misapplied, as few really serious cases ever recover when taken to it. The place is kept fairly clean (for Chinese) and the ventilation good. The treatment of surgical cases especially is something horrible to witness. In fact, the cases are not treated, as we understand the term, but, if we are not mistaken, often assisted to die, by the use of thoroughly irrational and barbarous means. We cannot understand the reason for not employing foreign surgeons here, as the Chinese usually have great faith in Western surgeons, though they may reject their medical treatment.

The Chinese hospital of Dr. Kerr at Canton affords an example of this confidence, as his operations for stone now, I believe, outnumber those of any other man. The next settlement in order is the French colony of Saigon. It is situated up one of the large

rivers of Cochin China, and is said to be exceedingly unhealthy. Singapore, at the lowest point of the Malay peninsula, is only one degree from the equator. This is also a flourishing English colony, and numbers about 25,000 foreign residents. A voluminous report of the colonial surgeon is before me, but I will only make a few extracts from it.

The climate is one of perpetual summer. The average temperature, or approximate, as it is termed, for the whole year is 80.3° F.; maximum shade, 87.9° F.; minimum, 72.4° F. Though so near the equator, it will be seen that the thermometrical rise is not what is often experienced in high temperate latitudes. This is owing to the excessive rains that fall almost the year round, amounting to a yearly average of from 115 to 140 inches; the greatest amount in one day in 1880 was 24 inches. The so-called "Straits settlements" under English rule in the Malay peninsula are four. The number of patients admitted into the hospitals of these places in 1880 were, Europeans, 559; natives, 13,929. The mortality is one-half what it was a few years ago, before the present medical and sanitary organizations were completed. An epidemic of beriberi broke out in the Goals in 1878, and was also severe in 1879. The mortality was from 16 to 20 per cent.

Among the residences of the better class in Singapore there is little sickness compared with many places in more temperate climates, and the percentage of deaths relatively small. Malarial fevers are the most common forms of disease, though the types are not usually severe. Typhus fever and cholera are rare. That Singapore should have escaped the recent ravages of the latter in the Dutch East Indies is somewhat a matter of surprise, especially as there was no quarantine enforced. The only explanation which can be offered for it is that the settlement has an excellent aqueduct water-supply.

The cholera epidemic in Java has just begun to show signs of abatement. I regret that an attack of fever has made it impossible for me to visit Batavia, the scene of the greatest ravages of the scourge.

I am told by those who were there, however, that two to three hundred thousand would be a low estimate of the deaths from the disease during the last three months. In some villages of five to six hundred inhabitants, not more than one hundred and fifty escaped with their lives. The mortality rate was very high—estimated by the Dutch physician at 80 to 90 per cent. This is the third time that Java has been visited by a severe epidemic of cholera within the last eight years.

DUANE B. SIMMONS, M.D.

CEYLON, January, 1882.

STATE EXAMINATIONS IN ALABAMA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have recently read several articles in your journal on the subject of State examinations and legal requirements for those who propose beginning the practice of medicine. As you have not mentioned the laws of Alabama on this subject, I take it for granted you are unaware of them. These laws have accomplished great good during the five years of their existence, not only by returning to their colleges recent graduates who were incompetent, but in freeing the State of those great evils that travelled from State to State and imposed upon the afflicted and credulous. "The renowned cancer doctor" will not "stop for three days only," but gives our State a wide berth. Under the laws of Alabama, each County Medical Society is authorized to elect a board of five censors, whose duty it is to examine all applicants who are graduates in medicine, and who propose beginning the practice of medicine. A State board is authorized to examine all who apply, and to license when qualified, without regard to their having attended college; and no one can begin the practice of medicine in this State, under penalties of the law, without going before the County or State Board and obtaining a license.

J. H. GUNN.

CALERA, ALA., March 8, 1882.

A PLEA FOR BOVINE VIRUS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In an article entitled "Ineffective Vaccine Virus," which appeared in your issue of April 1st, the writer gives his experience at some length in the use of bovine virus, complains of its general inefficiency, and states that his usual success is about twelve and one-half per cent. in primary subjects, his latest experience having been with infants "from a few hours to a few weeks old." All physicians of experience in vaccinating know how difficult it is to obtain satisfactory results with infants of so tender an age, as compared with those somewhat older. Still, even taking this fact into consideration, his results were astonishingly poor. A short time ago one of the physicians of this department vaccinated four of these infants from the Maternity Hospital, and three of the vaccinations or seventy-five per cent. were successful.

The reason why physicians are not so successful with bovine as with humanized lymph is not entirely due to the inefficiency of the virus, but partly, also, to the wrong method of the physician in using it. To secure the best results from bovine virus, the arm must be scarified, and *not* denuded; and the scarifications should be made as large as an ordinary *thumb-nail* or a silver *half-dime*. Enough blood should be drawn to well moisten the quill, in order to dissolve the virus and render it capable of absorption. Water should never be used for this purpose. Care should be exercised not to draw too much blood. Should this inadvertently occur, it is only necessary to wipe it away and wait till the excessive flow ceases. Then the virus should be well rubbed in, and the arm allowed to remain bare until perfectly dry. It would seem that the bovine virus is less concentrated than the humanized, and more diluted with serum; hence it is necessary that it should be applied to a larger surface and in larger quantity. Therefore, the quill or bone points in general use at the present time are more fully charged than formerly, when only humanized virus was employed. Accordingly, one of these points is not sufficient for two vaccinations, as many physicians seem to suppose. If more attention were paid to these directions, and the charged end of the quill always used, better results would be obtained.

It should be borne in mind that warmth, moisture, and exposure to the air destroy virus very quickly. It should always be kept in a tightly closed bottle, in a cool, dry place, and even then it is advisable that it should not be used after it has been on hand for two weeks.

It is not claimed that, even in the hands of experts, bovine virus is quite as uniformly reliable as

humanized. For instance, in 1875 the results in this department in 24,000 primary vaccinations with humanized virus were 86.65 per cent. successful; while last year, in 21,450 with bovine virus, 82.66 per cent. were successful; in December last, out of 1,495 primary vaccinations, with bovine virus, our success was 94 per cent.

Shortly after beginning the use of bovine virus, we found that the difference was so slight as to justify us in giving up the humanized entirely. That was early in 1876, and we have never had any desire to return to it since. Both kinds were used as dried lymph on quill slips or points. When humanized virus is used direct from the vesicle—arm to arm vaccination—the success is much greater.

Your correspondent also complains of the irregularity with which the vesicles appear, and of a peculiar "raspberry" vesicle, which forms at the seat of vaccination occasionally. It is true that bovine virus will not always develop vesicles with the same uniform regularity as we find in using the other; but the difference is slight, and met with only in virus which is beginning to deteriorate, and it is such virus also that produces these "raspberry," or, as they are more commonly called, fungous or abortive vesicles. The latter are cellular in structure, closely resembling a vaccine vesicle in all appearances, except as to color. This is a dark or dusky red, like a nævus. They appear a little later than a true vaccination and remain unchanged for from two to four weeks, when they dry up, forming a brown scab which eventually falls off, *leaving no scar*. They cause little or no inconvenience and do no harm, except to mislead the patients and sometimes even physicians. It should be distinctly understood that they are not vaccinations, in any sense of the word, and that those upon whom they appear should be immediately revaccinated. In some cases there is considerable itching and a well-marked areola forms; with such there is a possibility that they possess a certain amount of prophylactic power, but this is so uncertain that the results should always be looked upon as failures.

Although bovine virus has been in use in this country rather extensively for the past ten years, the details of propagating, preserving, and using it are not as fully understood as they probably will be in the near future. State Boards of Health in all parts of the country are considering the subject of its cultivation, regarding it as a public necessity which should be under official supervision and furnished gratuitously to all. This will be a great improvement on the present method, which permits anyone to advertise the sale of it, as of any article of merchandise. And it is our sincere hope that the Empire State will be the first to inaugurate this reform.

J. B. Taylor, M.D.,
Inspector of Vaccination.

Health Department, 301 Mott Street, N. Y., April 5, 1882.

Stretching the Optic Nerve.—Dr. Kümmell, of Hamburg, has stretched the optic nerve seven times in five cases. The eyesight had been partly or completely lost from atrophy of the optic nerves. The operation is done by making a slit in the lower and outer part of the conjunctiva near the cornea. A curved hook is passed in and back, the optic nerve is caught and stretched, "not too strongly." Very slight symptoms followed the operation. In those cases where the blindness was not complete, there was some improvement.

New Instruments.

SURGICAL NEEDLE FOR WIRE SUTURES.

By WILBUR P. MORGAN, M.D.,

BALTIMORE, MD.

Dissatisfied with the old and clumsy way of dragging the wire through the tissues, by means of silk threads or ordinary surgical needles, I thought there might be some simpler method by which silver sutures could be placed exactly where they were wanted, and looked about for means to accomplish the purpose. The gutter-eyed needle and the needle with a screw-hole in the end not proving successful in my hands, I took a piece of tubing, such as they make hypodermic needles of, and cut off a piece two inches in length, one end of which was filed to a point. One quarter of an inch from the other end or heel of the tube, I filed a space one-

sixteenth of an inch wide, and half way through the tube. After cleaning away the filings and polishing, I had the needle wished for.

To thread it, take a silver wire and bend one end of it upon itself, making the bent portion a little less than one-sixteenth of an inch in length, and press it closely to the adjacent wire, then pass the straight end of the wire through the one-fourth of an inch of tubing left at the heel of the needle, from before backward, and when the wire has been drawn through its whole length the bent end of the wire be found occupying the space filed from the side of the needle, and, pressed closely in, will give no trouble, and can be used as easily as a sewing-needle through a piece of cotton.

The needle can also be threaded from the rear by passing in the wire straight and bending it in the space, cutting off any undue length to prevent it catching in the tissues as it passes through.

F. Arnold & Son, of this city, have made me some of these needles, and have made them quite strong by filling up and solidifying the tubing which forms the anterior part of the needle.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 26, 1882, *to* April 1, 1882.

Alexander, R. H., Major and Surgeon, having reported at these headquarters, will report to the commanding officer, District of New Mexico, Santa Fé, for duty as Attending Surgeon at District Headquarters, and Post Surgeon, Fort Marcy, N. M. S. O. 59, Department of the Missouri, March 20, 1882.

Tremaine, W. S., Capt. and Asst. Surgeon. Assigned to duty at Fort Porter, N. Y. S. O. 51, Department of the East, March 24, 1882.

Dickson, J. M., Capt. and Asst. Surgeon. So much of Paragraph 2, S. O. 51, C. S., as relates to him is revoked, and he will proceed to Fort Mc-

Henry, M.D., and report to the commanding officer for duty at that post. S. O. 52, Headquarters, Department of the East, March 25, 1882.

Gardner, Edwin F., Capt. and Assist. Surgeon. To report in person to the Commanding General, Department of the Columbia, for assignment to duty. S. O. 71, A. G. O., March 28, 1882.

Gardiner, John De B. W., Capt. and Asst. Surgeon. To report in person to the Commanding General, Department of Arizona, for assignment to duty. S. O. 71, A. G. O., March 28, 1882.

Robinson, Samuel Q., Capt. and Asst. Surgeon. To report in person to the Commanding General, Department of the Columbia, for assignment to duty. S. O. 71, A. G. O., March 28, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 1, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 25, 1882.	6	4	234	4	134	92	31	0
April 1, 1882	11	5	248	5	200	82	32	0

The Fourth Annual Commencement of the Columbia Veterinary College and School of Comparative Medicine took place at Chickering Hall. Degrees of D.V.S. were conferred upon twelve graduates by Dr. Alexander Hadden, President of the College. Certificates of honor were given to fourteen junior students. The prizes were awarded by Professor J. H. Gunning. They were as follows: E. A. McLellan, gold medal; H. C. Slee, silver medal; D. L. Johnston, silver medal; E. S. Breder, case of foot instruments; W. A. Soula, case of veterinary instruments; H. C. Slee, set of veterinary works; E. A. McLellan, mouth speculum. Edward S. Breder delivered the valedictory. The address of the evening was delivered by Dr. Ezra M. Hunt, Secretary of the New Jersey State Board of Health. The speaker reviewed the growth of comparative medicine, and showed its increasing prominence and importance.

Race Prejudice among Baltimore Physicians.— The following account of the recent action of the Baltimore Medical and Surgical Society is given in the daily press and carries its own comment and condemnation. We are glad to believe that the exclusion of a qualified physician from a Medical Society on account of his color was the work of but a few. But it is unfortunate that this few should have the power to bring reproach upon the profession by an action which was narrow-minded and cowardly. At the last weekly meeting of the Baltimore Medical and Surgical Society the Committee of Honor presented the names of several candidates for membership, with its approval, for action on the part of the Society. A member requested the committee to report the color of the candidates. Much excitement followed the question, and it was stated that one of the applicants for membership was Dr. Whitfield Winsey, a colored practitioner, whose office is at No. 116 East Fayette Street. In the discussion that followed many of the leading members of the society, several of whom are Professors in the medical colleges of the city, stated that they had met Dr. Winsey in consultation, and that he was an intelligent and experienced physician and surgeon, a graduate of the Harvard University Medical School, and that he had been a resident physician in one of the most prominent Massachusetts hospitals. No facts were brought forward detrimental to the professional or personal character of Dr. Winsey, and as the constitution of the society says that any physician of good professional and moral standing shall be eligible to membership, and makes no mention as to the color of applicants, it was expected that the application would be favorably acted upon. But the ballot-box was found to contain seven black balls, five being sufficient to reject an applicant. There were about twenty-five votes cast. After the adjournment of the society much indignation was expressed by prominent members of the profession at the action taken. The cause given for their conduct by those who voted against Dr. Winser was purely his color, one of them stating that his Southern birth prevented him from recognizing a negro practitioner. A distinguished Maryland medical Professor replied that he had carried a sword in the Confederate Army, but that his political sentiments would never interfere with his recognition of scientific merit in a member of the colored race. Dr. Winsey is a man of fine appearance, in the prime of life. He would be taken for a Caucasian by any one who was not aware of his African descent, and is generally recognized by the physicians of the city who are asked to meet him in consultation.

Priority in the Humane Treatment of Insanity. —According to the majority of authorities, Philip Pinel was the first to remove from the insane, their chains, and to treat them as human beings. This proud pre-eminence is now disputed, and with apparently good reason. Pinel, it would appear from an article translated from an Italian journal, by Dr. Workman, of Toronto (*Alienist and Neurologist*, January, 1882), was preceded by Chiarugi in his noble attempt. The former removed the chains from forty insane at the Bicêtre; earlier than this Chiarugi had completed a model asylum. The history of the rational treatment of the insane seems to require rewriting in some of its chapters.— *Chicago Medical Review.*

Iodoform in Anal Fissure.—Dr. Ferdinand Seeger, of this city, writes: "As apropos to the iodoform discussion, I desire to call attention to its value in anal fissure. Some years ago I was a victim of this painful affection. I tried every sort of local application but without result, and in despair of any other source of relief, had almost made up my mind to submit to an operation, when it occurred to me to try iodoform in the form of suppositories. I did so in a strength of three grains, and with magical effect. The very first one gave immediate relief, and a cure speedily resulted. I have since used this treatment in quite a number of cases, and with good results in every case but one. A mild aperient should be given until the healing process has advanced sufficiently, and the patient should be cautioned against a constipated habit.

"In the single case where the iodoform failed, I tried hamamelis suppositories in the strength of a quarter of a grain. The effect was fully as satisfactory as that obtained from the iodoform in the other cases, but as the hamamelis has a tendency to cause throbbing, fulness, and other pains in the head, it requires to be used with caution.

"Such of my professional friends as have tried this treatment are enthusiastic in its praise, and as I have not seen it mentioned by any one else, I am so bold as to suggest its trial to others through your excellent journal.

"I can endorse most of what has been said as to the value of iodoform in nasal and laryngeal ulceration. I tried it in several cases of diphtheria, but the results were not such as to encourage persistence."

A Bogus Medical College.—We have received through the kindness of Dr. Brodie the "annual announcement of the Detroit University Medical Department," together with some local comments upon the same.

The announcement has an imposing appearance. There is a list of thirteen professors and twenty-one lecturers. The professors have the novel prefix of "Venerand," "Very Venerand," or "Right Venerand." There are chairs on almost every subject, including "pyrology," "anthropology," and "sanitive science."

It appears that in reality "the large and commodious structure" advertised as used by the college is upstairs over a grist-mill; that the president is a cancer-doctor and a graduate of Buchanan's "Institute," and that the dean makes a specialty of "electrized anti-parasitic oxygen."

Pasteur's Splenic Fever vaccine matter is to be tried in Prussia. The Minister of Agriculture has empowered a commission, of which Virchow is a member, to investigate its value.

Humanized versus Bovine Virus.—Dr. E. M. Snow, Superintendent of the Board of Health, Providence, R. I., made some statements at the last meeting of the State Medical Society, which deserve some attention. He had used humanized vaccine virus in about twenty-six thousand cases. This virus had undoubtedly been transmitted from arm to arm since the time of Jenner, and probably this is the only true humanized virus in the country. The local and constitutional effects of this virus are precisely the same from day to day, as those described by Jenner. His description is perfectly reproduced by the vaccinations every week.

In regard to the protection from small-pox given by the humanized virus, it is absolutely perfect. Dr. Snow's experience on this point had been so positive and certain, that he had no patience in talking with those who denied that vaccination prevented small-pox. He related some cases.

On the other hand, with regard to bovine virus, Dr. Snow had had no experience; he had not used it; but he had known something of its effects when used by others. He had known two cases in which children lost their lives from small-pox because the bovine virus did not take effect. He had known from others of scores, and probably hundreds of cases, in which the bovine virus failed to produce any result. He believed it was generally acknowledged that the bovine virus, as used in this city, was very uncertain in its results.

The Sewer-gas Theory, and the drinking-water theory of the origin of typhoid fever, have formed the subjects of a warm debate among Vienna sanitarians during the past winter. The battle is not yet ended.

Fracture of Clavicle Treated without Apparatus.—Dr. H. R. Porter, Bismarck, D. T., March 15, 1882, communicates the following: "The case of fracture of the clavicle treated without apparatus, reported in Medical Record of March 4, 1882, by Dr. Newton, U. S. Army, prompted me to report the following case, which occurred in the same month, and about the same time last January.

"Doctor S——, while making a night visit, fell off the sidewalk, a distance of about three feet, fracturing the left clavicle near the middle.

"I was called in the morning and found the parts tender, swollen, and painful, and the Doctor *very irritable*. I proceeded to put the fractured ends of the bone in place, and to apply the old wedge-shape pad, etc., when the Doctor coldly informed me that he would not have any apparatus, that the least touch hurt him, and he would let it go without any dressing. I told him that he was the judge and knew the consequences, and left him. Nothing was done in the case. He wore a large overcoat without putting the left arm in the sleeve, and simply did exactly as the case reported by Dr. Newton, viz.: "He merely favored his left arm by carrying his hand in his breast; he did not use a sling." In about four weeks the bones were firmly united with but very little overlapping. The result was as good as is often met with when the best apparatus is used by the ordinary practitioner, or, perhaps, the skilful surgeon. I met the Doctor every day during his treatment of his fracture. He was very careful to walk on smooth ground, and the left arm received no unnecessary motion, and *no treatment*. The Doctor remarked that he had made worse jobs than that on other people, and I believe I have too."

Resigning a Professorship.—Dr. Samuel D. Gross, for twenty-six years Professor of Surgery at the Jefferson Medical College, has placed his resignation in the hands of the President of the Board of Managers. It is understood that Dr. Gross retires on account of advancing age and an indisposition to continue the fatiguing duties of his lectureship, and that the duties attached to the chair he has filled will be divided between his son, Dr. Samuel W. Gross, and Dr. John H. Brinton.

The late Dr. Pancoast, of Philadelphia was one of the most opulent of American physicians. His estate is valued at about one million dollars. It is said that Dr. Gross—another eminent doctor—and he used frequently to play checkers until late hours, and that no other diversion pleased him so much. He was of old Quaker stock, and through life preserved many of the quaint traits of that people, of whom the witty Sydney Smith said that he "did not believe there ever was a Quaker baby; that is to say, one born with a broad brim and in full quake."—*Harper's Weekly*.

Ought I to do it?—A correspondent from Minnesota, who signs himself "True Blue," writes: "I am a graduate of the University of Pennsylvania, where I served two years as an interne at Blockley. Two years since I settled in X——, where there are now practising six physicians; two homœopaths, two regular physicians who affiliate with the homœopaths, besides a regular, who was once president of the

State Medical Society, and myself. With the exception of the last I am on good terms with all the other physicians, socially and professionally. They are all that could be desired. In fact, one of the homœopaths is my wife's cousin, and is the professional attendant of all her family who are resident here.

"The old doctor, as we call him, and myself, are the only members of the State Society in good standing. The other two regulars have been expelled for consulting with homœopaths. This, of course, cuts me off from their professional counsel, which was of the greatest value to me during my first year in X——. In fact, I am indebted to them for my start in practice. On the other hand, the old doctor sold me a spavined horse for $150, upon my arrival, and when I forced him to take the horse back, somehow he grew to dislike me, and, I fear, is not my friend, as he has taken several of my patients from me, to spite the other fellows, as he calls them—meaning the two who befriended me and gave me cases. I will do the man the justice, however, to say that outwardly he is the very Bayard of regulars, and he hates a homœopath as he hates sin.

"Well, three months ago a man came to get me to attend a fractured leg of one of his men, it was a pay patient, and I needed the pay for it bad to pay the nurse who was now caring for my wife.

"I thought it strange that I should have the patient, as my friend was the family physician of his employer, who came for me, and I asked him if Dr. A. was not at home, for, although I would not consult with him, I would not steal his patient. 'Yes,' he replied, 'but I desire to have you take charge of it.' Oh, Mr. Editor, this was the happiest moment of my life. A seventy-five dollar case, and a surgical one, too!

"When I told my wife of it that night, it did her lots of good; it just seemed to encourage her.

"I was more than competent for the case, for I had had twenty-three cases like it in hospital, and had more than once been complimented by Professor Gross on my aptness with fractures.

"At the end of the third week, although everything was progressing finely, I thought best to have consultations, for fear—no I had nothing to fear, I knew I was right. Still I called in the old doctor, and, unfortunately for me, he happened to be in liquor, else he could not have used the language he did. Drinking was his chief fault.

"'H—l!' said he, 'he'll have a stiff ankle. Move it, man, move it—every day—so—so,' and the doctor very rudely moved the foot before I could stop him. From this the case went on from bad to worse. Still every week I took the old doctor with me. Six weeks had now elapsed, and no union. The patient was very uneasy and next day the employer would be home, and I knew instead of my fee, I should receive my dismissal; and I was poor and discouraged, and worn out with care for my wife, when I overheard the following between the patient and my counsel: 'Doctor will I have a good leg?' 'Good leg; no, you won't.' 'For God's sake! why not, doctor?' 'Because you have got a d—— fool attending you; you were thrown to him by Dr. A. as charity, or for him to practise on. Why, he'd starve if these other fellows didn't send him patients.'

"I said to my little wife that night, 'Lucy, I am sorry I did it, but I just said, "You ——, ——, ——, ——, —— old hog." Then I took the washstand by two legs and knocked him down stairs, and this broke his collar-bone.'

"This, too, seemed to do my little wife much good, and it encouraged her.

"As for the old doctor, he entirely ignores me, and sends for one of the irregular doctors to treat him. Now I am the only regular physician there is in town, as I have preferred charges against the old doctor for consulting with these other men. Ought I to do it?"

[This is truly a complicated case. The ethical points should be decided in accordance with the rules prevalent in the locality where the parties reside. We think, however, that justice should be tempered with mercy, and insomuch as our correspondent has broken the old gentleman's collar-bone, he might with propriety let the matter rest there; indulging also in the hope that the "irregular" will do his work well. Our correspondent will possibly have to wait for the spring crop of new doctors before he can hold any more consultations.—Ed.]

The Garfield Memorial Hospital.—At a meeting of those directing the movement for the erection of this hospital in Washington, it was announced that nearly enough money had been obtained to justify beginning the work of erection.

The Jefferson Medical College held its annual commencement on March 30th, and graduated a class of 247. It is stated in the daily press that the degree of D.D. was conferred on the Rev. I. L. Nichelson and the Rev. Charles Maison, of Philadelphia, and the degree of LL.D. on Dr. Thomas Addis Emmett, of New York. The granting of degrees in divinity and laws by a medical college is rather an unusual procedure.

Dr. Lamson.—Great efforts are being made to save Dr. Lamson. It is said now that he was a monomaniac on the subject of aconitine. When he was a physician in the hospitals during the Turko-Russian war, he used aconitine as a remedial agent as freely as if it would cure all things. He gave so much of it that it was observed and complained of by the other doctors, who believed he was crazy on that subject. The young man he was accused of murdering died of an overdose of that poison given by the defendant.

An Important Change in the French Naval Medical Service has been made, by which the powers of the medical officers have been greatly enlarged. The change puts all the naval hospital establishments under the care of the medical officers. They had previously been under direction of the commissariat officers. The medical corps could do nothing but attend the sick, they could not even discharge a nurse.

The National Council of Zurich has decided on making vaccination compulsory.

Herr Wickersheimer, the inventor of the fluid for preserving anatomical and pathological preparations, is reported to have discovered a means of preserving bread, meat, and beer, for a long time.

Skoda.—A new street in the neighborhood of the General Hospital in Vienna, is to bear the name of "Skoda Street" (*Skodagasse*), in honor of the celebrated physician and clinical professor.

The Municipal Council of Villefranche, in the department of the Rhine, has voted the erection of a statue to the illustrious physiologist, Claude Bernard. It is to be placed in the square which already bears his name.

Original Communications.

A MOST RARE, POSSIBLY UNIQUE, CASE OF GENERAL ERUPTION OF VACCINIA.

By HENRY AUSTIN MARTIN, M.D.,

BOSTON, MASS.

In the month *Prairial* (May) of the year VIII. (1800) of the French Republic, one and indivisible, met in Paris an assemblage not only of illustrious physicians, but of citizens eminent in many arts and professions. This meeting was the germ of the famous "*Comité central de Vaccine.*" With it were associated and in correspondence similar committees in every department of France. The object of all these, forming one harmonious whole, was not only to inaugurate and establish the practice of vaccination in France, but to collect and publish all attainable information in regard to the history and phenomena of vaccinia. In no other country was vaccination hailed with the same loyal enthusiasm of all cultivated classes. In no country was its investigation carried on with so much zeal and intelligence.

To the *real* student of vaccination (there *are* a few) a precious monument remains of the labors of the *Comité* in the series of reports published in Paris by the central body, containing as they do all that was most valuable, original, and suggestive in the reports of the numerous corresponding provincial committees. The first of these was published in 1803 (*An XI.*). It is a stout octavo; its author, Dr. Husson, Secretary of the Committee, a name illustrious among those of the earliest disciples of Jenner. I know no volume in the vast literature of the subject so full of interesting and important *materiel*. This was followed almost, if not quite, every year for forty years by similar reports, whose authors, or rather editors, were always men of the very first authority of the time. The series for the last forty years is of reports appearing at irregular and less frequent intervals, and possessing certainly far less merit than their early predecessors. These reports, often reaching the dimensions of volumes, contain an immense accumulation of original narratives of the normal and abnormal phenomena of vaccinia, and of the often wise and very often foolish surmises and theories founded upon them. Even a merely superficial "going through" this series, as is the manner of the species, might make the fluent writer of "*echaustive papers*," and college lectures and text-books, blush to find how long ago and how repeatedly his favorite *original* observations and theories had been fully recorded, broached, and exploded.

I am so fortunate as to possess an approximatively complete set of these reports, many of which are now extremely rare; and whenever I see an *original* observation or peculiarly brilliant and *quite* new theory in vaccination, I turn to their pages with perfect confidence, hardly ever disappointed, of finding it somewhere among the first five years after 1800.

Very recently, a case has come under my notice, which, as I cannot find its parallel in this vast magazine of exceptional cases, may well be assumed to be very uncommon, if not unique, and, on that account alone, perhaps worthy of permanent record. It seems to me, however, far more worthy of notice, than from its mere rarity, in connection with that theory of the absolute essential identity of variola and vaccinia which a good many physicians assume to have been demonstratively proved; an opinion in which others, not quite so ardent, are hardly *yet* prepared to agree with them. The case was a most perfect and undoubted one of general vaccinal eruption. What any competent and careful observer would call a general *spontaneous* eruption of vaccinia has always been a very rare anomaly, a very large proportion of cases so heralded and recorded having most clearly been either eruptions of *varicella* or from *auto-vaccination*, or contact with another *vaccinee*. I find no case in all the literature of vaccination which I have toiled through in this special research, in which a *re*-vaccinated nursing mother communicated undoubted vaccinia to her nursling through the medium of lactation, and such, without doubt, was the case I now put on record.

A lady of Boston, aged 36, was re-vaccinated on the 13th day of February, 1882, with bovine vaccine virus. On the same day one of her two children, a boy aged three, was also vaccinated, but the other, a seven months' infant at the breast, was not submitted to the operation. The reason for this omission was that the latter was suffering from *eczema capitis* (*crusta lactea*), and the physician feared an aggravation of the eczematous eruption from vaccination, and a consequent considerable and very undesirable burden of care to the mother, in case her own secondary vaccination should be at all troublesome. The vaccination of the mother was effective, but only a slight vaccinal effect was noticed—itching, slight efflorescence, and a faint approach to vesicular eruption and areola, but on the 1st of March (Wednesday) the slight scab which had followed it had fallen. On that day, the sixteenth after the mother's revaccination, it was observed that the infant was somewhat fretful and feverish, and a number of little red pimples were seen on the arms about and below the elbows. On the third day after this (Saturday) these had so increased in size, changed in character, and multiplied in number, and so many others had appeared on other parts of the body, that the attending physician was called. It was very noticeable that the portions of the surface on which the eruption of *eczema* had been most marked, were the seats of the most abundant eruption of this new visitation.

The physician in attendance on the case most kindly afforded me repeated opportunities of seeing it, and, on the first occasion, visited it with me, desiring my opinion as to its character, for it had appeared to him so very much like small-pox that, as a measure of prudence, he had reported it to the local board of health. I first saw it on Monday, March 5th, the fourth day after the commencing eruption had been noticed on the arms, and the twentieth after the mother's re-vaccination. I found the infant very fretful, and continually trying to scratch the parts most covered by the eruption. When, however, the mistaken application of vaseline on rags was removed, the most irritable parts of the skin bathed, and then dusted freely with finely powdered starch, this symptom subsided considerably. The temperature was slightly elevated, not more than two degrees above normal. On examining the entire surface of the body, at least four hundred clearly defined, perfectly circular, invariably umbilicated vesicles were apparent. The two forearms, chiefly on their lower surface, the ankles, and legs below the knees and the left cheek were the sites of certainly all but about one hundred of these. The remainder were

scattered about on other parts of the surface, singly and in groups of two, three, or more. The surfaces of the abdomen and of the back were almost free from them. On the upper part of the chest, the upper arms, the thighs, the neck, forehead, and right cheek, were very nearly all the vesicles not found on the two forearms, the legs, and left cheek. On these five places, when I first saw the case, the eruption was nearly confluent, the vesicles being closely *coherent*. The eruption had wonderfully the appearance of that of variola on the fifth or sixth day. The vesicles were, however, more perfectly and invariably absolutely circular. No matter how near to each other, not one vesicle varied in the slightest degree from a perfect round. On the arms—on one particularly—a considerable number of the vesicles had been torn open by the patient, exhibiting very clearly the peculiar cellular structure of the vaccine vesicle, and from these exuded a considerable amount of a perfectly colorless, pellucid fluid. Around each separate vesicle and group of them, was a bright areola of limited extent and of more symmetrical approach to a circular outline than observed, at a certain stage, around the pustules of *variola*, *varioloid*, or *varicella*. Counting the first day (March 1st) on which the papular eruption was first noticed by the mother as corresponding with the fourth day after vaccination, as I think it fair to do, the day I first saw the case would be the ninth, the day on which the areola of vaccinia from vaccination *direct* from the heifer (with heifer-transmitted cow-pox) *begins* to appear, but the day on which the areola of vaccinia, induced by one (human) remove, virus is *fully* formed. My diagnosis was of a general eruption of vaccinia; that it was, when I first saw it, at its acme, and, if I was right, that desiccation would rapidly follow.

I very much regret that I did not procure photographs of this case on the day of my *first* visit, but it was quite late in the day, and on visiting it in the forenoon of the next day (Tuesday), I found that the beautiful, clear definition of every vesicle had almost entirely disappeared or been much modified.

Desiccation had not only commenced, but very considerably advanced, and already a confluent scab covered a large portion of the surface on which the eruption had been most abundant. It was too late to take any photograph which would give the perfectly satisfactory and convincing idea of the eruption which one taken the previous day would have afforded.* The vesicles had not appeared simultaneously, but had come out as in variola, only that, instead of first appearing on the forehead and back of neck, and regularly and gradually descending to the feet, they had appeared on the arms and afterward on other parts of the body, without any ascertainable symmetry, but selecting those parts of the skin on which the eruption of *eczema* had been most troublesome, very few vesicles appearing on parts of the surface not previously so occupied. I took two moulds in gutta percha of parts of the upper arm, on one side, on which still remained a few characteristic vesicles. Into these I cast plaster-of-Paris, and the casts thus obtained exhibit an image of a few of the vesicles, and on two or three of these the umbilication is clearly perceptible, but the isolated vesicles were much smaller than the older ones of which the nearly confluent patches were composed. I charged seven or eight of my "*lancet*" ivory points* from some of the vesicles which still exuded a little fluid on puncture. Desiccation had been much more rapid than is ever noticed of the two or three vesicles usually resulting from ordinary vaccination, as rapid as is ever noticed in even the very slightest cases of that most insignificant of all exanthematic affections, slight post-vaccinal varioloid. Fever and areola had entrely disappeared, the latter even around the large semi-confluent patches. The child seemed comfortable, and to have no inclination to scratch the skin anywhere. I visited the case again on the 9th (Thursday). Many scabs had been rubbed off, but over each of the confluent patches they remained adherent, except where somewhat broken off at edges.

Where the removal of scabs exposed the surface beneath, it was evident that the *corium* had not been involved to such a degree as to endanger pitting of the single vesicles or small groups of them. I again saw the child on the 15th or 16th. The mother gave me quite a number of the scabs, on many of which perfect umbilication is evident. Very few adherent scabs remained on any part of the body. The parts of the skin which had been occupied by the confluent and semi-confluent patches had very much the appearance of a surface from which the scabs of *crusta lactea* have been very recently removed. There was no indication of loss of substance below the epidermis or, of course, of subsequent pitting. This was my last visit.

It is very noticeable, since I introduced *true* animal vaccination (September, 1870), that more and more are noticed and reported of those general eruptions and rashes, which are constantly referred to by the writers of early, particularly of the very *earliest*, years of vaccination, but which certainly do not complicate, to anything like such a degree or in any such variety, the vaccinia induced by the virus of long humanization. Willan, who published an admirable illustrated quarto in 1806 "On Vaccine Inoculation," speaks of a profuse and general miliary eruption as being noticed about once in fifty cases of vaccinia in the human subject. I first noticed it after I commenced to use the heifer-transmitted cow-pox virus and sufficiently to corroborate very exactly Willan's approximative estimate of its frequency. The areola of the vaccinia, induced by *true* bovine virus, is much more intense and marked than in long-humanized vaccinia. Now and then, very rarely, when the areola is most vivid, in plethoric infants and children with very vascular skin, are seen, within it, little globular vesicles, not at all umbilicated, and containing a fluid which on inoculation induces no effect whatever. These are nothing more than little effusions beneath the epidermis, without any specific character, and mere results of intense congestion of the vessels of the corium. The very minute miliary eruption is composed of vesicles which, on examination with the aid of a good lens,

* I understand that, some hours after I saw the case at my second visit, a photographic negative of it *was* taken. I have not seen any print from this.

* I see so many glowing commendations of these large ivory lancet points in the advertisements of *gentlemen* who invariably fail to mention who invented them, that I may as well take this occasion to state that the large size of the modification of the English vaccine point, now very universally used in America and coming into use in Europe, was adopted for the needs of animal vaccination by myself, from a suggestion of Marson's, quoted in Seaton's excellent hand-book, while making the ivory point sharp and as nearly as possible like the blade of a common lancet, was my exclusive invention. It has been found very useful. I did not patent it, though it seems to be the custom for some professional men now to do such things. I understand that an application has been recently made to the Patent Office, by a physician, to patent points of quill made in a way invented by myself full thirty years since, and employed constantly till I abandoned all others for the "lancet" point of ivory. A custom "more honored in the breach than in the observance."

reveal decided umbilication. I once charged two points by rupturing several of these minute vesicles and failed to induce vaccinia in using them, but I do not consider that experiment final and intend to repeat it. Besides these, are certain rashes often like the eruption of roseola (or *die röthein*, or German measles, to adopt modern nomenclature, and sometimes like that of measles or of scarlatina, and now and then, quite rarely, like that of *urticaria*, and occasionally of large red splashes or blotches covering parts or all of the body. These eruptions are very fugacious, very evanescent, and of very little real consequence to anybody except the ardent anti-vaccinator. They always appear at the time that the areola is at its acme of development, and, are not without analogues in instances where any very intense inflammatory congestion occupies a limited portion of the cutaneous surface. I am speaking of symptoms occurring occasionally in the vaccinia induced by the use of *pure* vaccine virus, collected from perfectly typical vesicles of true heifer-transmitted cow-pox. I have nothing now to say, but by and by a great deal, of the innumerable symptoms—always extremely annoying and destructive of the *prophylaxis* sought, and occasionally extremely grave and even fatal—which have, and do, and will, more and more complicate the use of the abominable, factitious, fraudulent preparations of so-called "*pure borine lymph*" which ingenious ignorance has distributed far and wide, particularly during the recent winter, spreading misery and disease and sowing broadcast seeds of failure and imperfect or quite delusive *prophylaxis*, which, in the near future, will ripen into a full crop of pseudo *post-vaccinal variola* and anti-vaccinism.

But excuse this digression. "Out of the fulness of the heart the mouth speaketh," and *my* heart is pretty full of this subject of fraudulent vaccine virus just at present. In all my very long and large experience of vaccination with long-humanized virus, I never saw or knew of a case of anything like a general eruption of vaccinia. I have seen many cases of *nominally*, but not *really* spontaneous, vesicles, the effect of *auto-vaccination*, or accidental contact with a *vaccinee*. Since I have used heifer-transmitted cow-pox virus *direct* from the animal, I have seen three cases of general vaccinia, two besides that now imperfectly narrated, and both, like that, were in children suffering from an extensive eruption of *eczema*. This is certainly not a mere coincidence, but an extremely interesting and important observation. How and why interesting and important I purpose to tell in another paper.

In looking up the subject of general vaccinal eruption, I found accounts of many cases of the sort, almost all, however, being clearly not really cases of general eruption in the sense that the eruption of variola or of varicella is so.

One case, the nearest analogue to that I have recorded, was so very curious that I will terminate this paper with a translation of the account of it in the *Rapport du Comité Central de Vaccine sur les Vaccinations pratiquées en France pendant l'Année* 1810. A *Paris de l'imprimerie Impériale*, 1812.

"A girl aged four years had been vaccinated in vain several times in 1809. She was again vaccinated without effect in 1810. This persistent refractoriness of the system to contract vaccinia induced M. Cazals, a physician of Agde, to adopt the following method: He was in the habit of using the vaccine crust; he thought this had proved too feeble as an *external* appliance, and to accomplish the desired end he induced the parents to give to the child, as a pretended vermifuge, a pinch of powdered vaccine crust. This was done in a tablespoonful of soup. The child suffered no inconvenience till the fourth day, at which time the places previously vaccinated exhibited a slight appearance of effect. She suffered some evident langnor, nausea, and even vomiting as in variola. There was very smart fever, with faintness, nervous restlessness, and extreme prostration. This condition continued during nearly six days, and at the end of that time there appeared a general eruption of one hundred and eighty (180) vesicles, all of clearly vaccinal type; each followed its natural course, the inflammation of the circle or areola extending to several millimetres around each vesicle, in many places all the areolæ combined so as to make one single large area of cutaneous congestion. From the eleventh to the twelfth day the areola declined. There remained some slight, hardly perceptible efflorescence, and fever ceased at the beginning of the thirteenth day. On the fourteenth day the scabs had become black but did not fall till the twenty-first day."

Although M. Vigoroux, who forwarded this observation, has refrained from any comment, and confined himself to a simple statement of the facts, the committee cannot help regarding the proceeding of M. Cazals and his conduct in employing it as extremely bold if not indeed *temeraire*, with which dead and buried reproof from many "good doctors," whose souls "are with the saints I trust," I close for the present.

On looking over these very hastily written pages I find that I have forgotten to state the quite important fact that, with the points charged at my second visit (tenth day), I inoculated, on the outer margin of the left *labium pudendi*, a very fine yearling Jersey heifer calf, which I devoted *exclusively* to the experiment. I inserted the virus in six places, in slight superficial incisions of about one-third of an inch in length, and in one place, on the under side of the tail near its insertion, by inserting a thin soft little scab, from the top of a desiccating vesicle, in a deep, very oblique puncture. On the third day it was evident that all the insertions had "taken." On the seventh day there were seven fine typical vesicles at places of insertion, and two so-called "spontaneous" vesicles.

These were so very evidently vaccine vesicles that I did not hesitate to charge a few points from them, and with these made three primary and one adult secondary vaccination. These were all successful. Two of the primary cases exhibited very fine vesicles and areolæ at end of ninth day. The third case, was of an irritable child, who managed to rupture the two vesicles at points of insertion, but a third small "spontaneous" vesicle was very perfect in all respects. The re-vaccination "took" very slightly, but with unmistakable vaccinal effect. Neither have I mentioned the size of the vesicles in my narrative of the case. Although very perfect in form and type they were smaller than seen in successful ordinary vaccination. The largest, of which were the greater number, were somewhat larger than the average small-pox vesicles (before matnration), while many of the smallest were of not half that average size. The facts of the small size of the vesicles, and that no slough from the true skin and consequent pitting ensued, are interesting, as proving that the far greater intensity of action, degree of development, longer active continuance, and much less rapid desiccation of the two or three vesicles

of ordinary vaccination, with the most vigorous *virus*, are simply results of the process by which the patient is protected being confined to so few points. They add to the proof, if addition were necessary, of the importance of the perfect, full development of the *vesicles* and areolæ of vaccinia, and show why, in the use of the much-changed and deteriorated virus of very long humanization, it is very important to multiply points of insertion, as also proved by Marson's thousand times requoted tables.

It is proper to state that the two children did not sleep together, and if, under any circumstances, such an extensive eruption could have resulted from continued and frequent contact, no such contact or opportunity for it occurred in this case.

CASE OF FRACTURE OF THE OS HYOIDES.

By JAMES G. LA ROE, M.D.,

GREENPOINT, L. I.,

PHYSICIAN TO THE BROOKLYN (E. D.) DISPENSARY AND HOSPITAL; MEMBER OF KINGS COUNTY MEDICAL SOCIETY.

It has occurred to me to give for the benefit of "whom it may concern" the *résumé* of a rather unique case. I use the term advisedly for the reason that on consultation with a number of my confrères they all agree as to its rarity. Besides, a rather careful perusal of the different surgical authorities further strengthens our opinion in the premises and justifies a brief description of it.

On the 1st of February last, I was called to B. P. J——, aged twenty-seven, married, and an engineer by occupation. He is short of build and very thin, not weighing over one hundred and twenty pounds. To describe the symptoms of his ailment at that time is to tell of a slight tonsillar trouble, a condition of things to which he is very subject.

A gargle of chlorate of potash and tannin speedily solved the difficulty, and he ventured to return to his work. Exposure by working in a damp place brought on a violent attack of follicular tonsillitis. This proved very obstinate, but it finally yielded to repeated topical applications of ferri persulphatis.

Five-grain doses of quin. sulph. dissolved in two teaspoonfuls of the elix. prun. virg. was also given every four hours.

Although very weak, he determined to go to work on the Monday morning following. After a good night's rest he arose early the next morning, and as he did so thought he would indulge in the luxury of a good "gape." But alas, as he "enjoyed" he felt something snap just below the inferior maxillary, and immediately thereafter felt a slight swelling at that point.

Thereupon ensued great pain, made more intense by attempting to swallow the saliva. My first thought, before examining him, was that the inferior maxillary had become misplaced, but a glance proved the incorrectness of my suspicion. He directed my attention—in a very languid voice and hard pressed for breath—to a small lump just below the inferior maxillary and on the exact point where he felt "something snap." It produced exquisite torture as I pressed. His face presented as distressed a look as I have seen in many a day. What was the trouble? During all my practice I had never seen a case like this. Memory, however, proved equal to the emergency, and it came back to me like a flash after a lapse of at least a dozen years. While a student at Bellevue, I remembered to have seen the duplicate of this. It occurred in the service of Professor Hamilton. The accident occurred in the same manner, though usually the result of direct violence. As, for instance, the grasp of a murderous hand or a blow to the same purpose. The question to be decided was: Is it a fracture or dislocation of the os hyoides? When I pressed the slight tumor and tried in different ways to reduce it, it would not "down." My patient would hardly allow me to touch it a second time. After a while, however, he grew reconciled to the inevitable, and I satisfied myself accordingly. A slight crepitus was apparent after a careful examination, and I came to the conclusion that the right cornu was involved. The fracture was evidently at the junction with the body. I attempted to pass a probang into the pharynx, but my patient "gagged" so that I had to desist. I handed him a glass of water, and the first mouthful made him turn red in the face. He looked more distressed than before, if that were possible, as the water returned the same way it had come. It took him some minutes to regain his breath properly. I attempted to place my fingers in the mouth, in order to reduce the fragments—as recommended by Holmes—but met with poor success. I came to the conclusion to let well enough alone, in order to gain a little breathing-time for both myself and patient. There was so little displacement that nothing could be gained by extreme measures. Holding the head backward and pressure by means of adhesive straps were alone recommended, and internally the usual astringents. Having no "œsophageal tube" handy, as suggested by some surgical authorities, I could not tell my patient to take his food that way. If need be, I determined to resort to the last mentioned mode of sustaining life. For the present, perfect rest alone was advisable, since he was in no danger of suffering from asthenia.

When I saw him the next day a little wine had passed his lips. He had managed to swallow it almost drop by drop. It was cruel torture to attempt anything of the kind, but he realized how necessary it was to quench his natural thirst at least. In order to see how it would work I asked him to swallow a little before me. He did so very slowly, and anybody who has seen a victim of hydrophobia when water is handed to him can imagine the result. There was a spasmodic action of the throat, an agonized face, and once, when a few drops more than usual had passed down, a rejection of the same. He pronounced himself as completely discouraged at the prospects before him. Though usually having a good appetite, he felt comfortable without food for the first few days. As time went on he learnt the trick of holding his head in a certain position, thereby suffering less pain and absorbing more liquid nourishment. The position he assumed was downward and toward the right clavicle.

I attempted several times to pass the probang but found it impossible in view of the increased hyperæsthetic condition of the intestinal tract.

Different authorities assume that the head should be thrown backward, and, as mentioned above, this was ordered. At first I was a little adverse to my patient's use of his discovery, but he proposed to take all the comfort he could in his sore strait, and I could hardly blame him. In the end it proved all right.

At the end of two weeks the lump had grown the least bit smaller, but still the pain existed. For its moral effect I ordered a liniment composed of chloroform, tinct. opii. and lin. sapon., to be used four or five times a day. A couple of days later the sore-

ness on the outside was reduced to a minimum, but it was fully three weeks before it had disappeared. Meanwhile the exquisite pain grew less when attempts were made at deglutition. Simultaneously, as might be supposed, with the disappearance of tumor the torture of the throat ceased to exist. It is true there was a slight soreness for a day or two afterward, but that was as nothing to what had preceded it. My patient did not seem to mind this trifle, but made haste to make up for lost time in exercising his gustatory powers.

It may be taken for granted that he presented a very emaciated appearance for the first few days of convalescence, but in due season he gained the flesh he had lost.

In writing on the subject of fractures and dislocations of the os hyoides, the majority of the different surgical authorities are pleased to dismiss the subject with a few curt lines.

Holmes, probably, is the one exception who does not. It is true the accident is of rare occurrence, but for all that, like any accident, it may occur to any one of the numerous readers of THE MEDICAL RECORD to meet with it in his own practice. For that reason it would surely do no harm to better emphasize the subject, and a few lines further will not, I trust, prove out of place.

Hamilton says: "The fracture is characterized especially by displacement, difficulty of deglutition, and sometimes by difficulty in respiration."

Of the ten (10) cases which he found recorded, five (5) recovered. Among the cases which recovered, three of the fractures had been caused by grasping the throat, and one was caused by muscular action. As to treatment, what alone had been done in my patient's behalf is mentioned.

Holmes says as to diagnosis: "It is usually caused by direct violence, but in some instances has been attributed to muscular action. . . . The symptoms are pain in the neck, inability to turn the head, dysphagia, or even total inability to swallow. The voice is hoarse, the patient having great difficulty and pain in speaking. Symptoms of suffocation occasionally occur, or may be produced by simple protrusion of the tongue. On examining the throat externally, crepitus, or some irregularity may be detected; and on looking into the mouth, not unfrequently ecchymosis and swelling of the mucous membrane may be found. The fragments occasionally perforate the mucous membrane and more or less bleeding may occur."

In an interesting monogram by Gibbs of Churchhill, London, and dated 1862, there is narrated the particulars of thirteen (13) cases of fracture. In four of these the right cornu was broken, in five the left; and in one (that of a child) the middle of the body of the bone was broken. In two the precise seat of the injury is not stated. Two of the cases terminated fatally.

As to treatment, Holmes is a little more explicit than is Hamilton. "The displaced fragments must be restored to their proper position. This may be effected by passing the finger of one hand into the throat, and by the other hand manipulating the bone externally. The patient should be kept quiet, every attempt at speech avoided, and antiphlogistic regimen adopted. Inflammation may be relieved by the application of leeches. If great difficulty of breathing should supervene, laryngotomy must be performed. If the patient cannot swallow or finds great difficulty and pain in doing so, the use of the œsophageal tube is requisite. If the passage of this tube produces much pain or inconvenience, nutrient enemata must be administered."

Holmes quotes, further on, a case reported by Lalesque. There was considerable hemorrhage and he had to be fed by an œsophagus tube for twenty-five days, and ultimately recovered. In this case there was considerable deformity, which made deglutition impossible.

As to diagnosis, Erichsen makes no new suggestions. He calls attention to two points. "Should one piece of the bone be driven much in, it might possibly require to be drawn forward with a tenaculum. The head should then be fitted with a stiff pasteboard collar to prevent displacement."

The awkwardness of both the injury and the position in which the neck must be held makes the prospect anything but inviting. Still one can readily understand under what circumstances this resort would be absolutely necessary.

Druitt mentions emphysema as one of the symptoms attendant on fracture of the os hyoides. Further on, he says: "In a case of perpendicular fracture of the thyroid cartilage seen by Dr. Gibb, the two lateral portions were separated at pomum Adami, but the only symptoms were loss of voice and an 'indescribable sensation' in the throat."

This is significant in view of the close proximity of the os hyoides. Would not a slight fracture of the latter bone be just as liable to give the same dearth of diagnostic data? It would seem plausible, at least.

As to treatment, Druitt indulges in the usual "glittering generalities."

In looking over Chelius' work on surgery, as translated by Dr. South, I see that he refers to the accident under the heading of "Fractures of the Tongue-Bone." The edition I refer to bears the date of 1847, and one is struck at the similarity of language in the whole article when it is compared to the more modern works on surgery. To repeat what is written, both as regards diagnosis and treatment, would be to reiterate what I have already quoted.

The only deviation is the remark, in parentheses, made by the translator, Dr. South: "The only examples of fracture of this bone of which I am aware are those of persons executed by hanging, in which fracture is almost invariably found."

Both in language and experience it would seem that Dr. South doubts the possibility of its occurring otherwise than by hanging. He does not go as far as Chelius, who insists that it "is always consequent on direct external violence, and almost always occurs in the horns of the bone."

Presumably they would have both changed their minds if they but lived at the present day, and the experience of our modern surgeons were open to their criticism.

Bryant makes no mention of the subject under consideration. At any rate, I have failed, after a careful examination, to find it. He possibly did not think it of enough importance to write about.

In conclusion, a word as to my treatment of the case in question. As has been seen it was almost nil. Micawber-like, I waited for something to "turn up." True, the deformity was very slight, and therefore nothing could be gained by attempts at reduction. The adhesive straps, ordered at first, were not insisted upon, as nothing could be gained thereby. Placing the head in a stiff pasteboard collar, to prevent further displacement of the fracture, would have been clearly indicated had the breakage been

larger. Under the circumstances, I was fortunate in meeting with a case that did not demand it, and my patient was lucky in that he was not obliged to submit to the imprisonment.

115 Noble Street, March 25, 1882.

THE FALSE MEMBRANES OF DIPHTHERIA.

By ROLLIN R. GREGG, M.D.,

Buffalo, N. Y.

In an able paper by Dr. Ferdinand Cohn upon "Bacteria," he says:

"Every one knows how mercilessly diphtheria destroys so many promising lives—an easily transmitted contagion, which usually firmly seats itself in the throat and air-passages, generating there a membranous formation which threatens immediate death by suffocation. The microscope shows in all the organs of the diseased person numberless spherical bacteria, heaped together in thick masses, which pass through and besiege the tissues of the muscles, vessels, and mucous membrane; everywhere congestion, inflammation, and a general blood-poisoning follow in consequence."

The inference from this language, and especially from the expression "numberless spherical bacteria, heaped together in thick masses, which pass through and besiege" the mucous membrane, etc., is, that the false membranes of diphtheria are constituted of bacteria; and this is the teaching of many bacterists. But nothing in pathology is better settled than that said membranes are composed of fibrin. Oertel, in speaking of the "Croupous form" of diphtheria, says:

"The characteristic symptoms of this form is the *exudation of fibrine*. Almost immediately after the beginning of the diphtheritic process, or after a more or less free production of pus has taken place for some days, fibrine is poured out, not only into the epithelium—which is already infiltrated with micrococcus—but also into the interstices between it and the subepithelial tissue of the pharyngeal mucous membrane."

Flint, speaking upon the same subject, in his "Practice of Medicine," 1881, says, more concisely:

"Diphtheria is characterized anatomically by the presence, upon certain mucous membranes, of a fibrinous exudation in the form of a false membrane."

One thing, however, is certain in connection with this subject. These false membranes cannot be all bacteria, as some would have us infer, and all fibrine as others say. They must be made of one or the other exclusively, or of both combined in some proportion. If of both, in what proportion are they combined? This must be a question that can be solved. Certainly, vegetable parasites must differ sufficiently from coagulating fibrin to have their differing ways and results discerned. Then think of the absurdity of a diphtheritic membrane, which is sometimes as polished and glistening upon its free surface, as is the free surface of a synovial membrane, and not unfrequently almost as dense and thoroughly organized—think of this being made of vegetable organisms which have no means or power of uniting themselves together into a homogeneous, thoroughly organized structure as these false membranes generally are, while fibrin does do just such things.

Micrococci, or vegetable granules, could no more organize into a firm structure, membranous or otherwise, than could a mass of mustard-seed, although through moisture they might adhere slightly to each other, as would wet mustard-seed, but not to coalesce into dense membranes. Rod-like bacteria or vegetable fibrils can only interlace to a very moderate extent; and spiral bacteria intertwine in just as limited a manner; so neither of these can possibly organize to form membranes. We might as well say that growing-grasses would do that. Fibrin, on the contrary, can and always does coalesce, or fibrillate, into dense membranes, whenever the opportunity offers, so there need no longer be any doubt as to what the false membranes of diphtheria are, any more than what the false membranes of pleuritis or peritonitis are. Of course, if pus is formed and mixed with the fibrin while the latter is in its fluid state, or if great numbers of the granules of broken blood-corpuscles become mingled with the granules of fibrin, before these can join to form the interlacing threads, as must often happen, then the membrane must be less firm and more cheesy, as is also often the case, and simply because the pus, or the granules of broken blood-corpuscles, hold the particles of organizing fibrin more or less separated, so they cannot unite together so firmly as would otherwise be the case. The meshes of the organizing fibrin are filled with pus or cheesy matter in such cases, which makes the membrane more friable, or crumbling, than would the pure fibrin.

As to what Oertel says of the epithelium being "already infiltrated with micrococcus," before the pouring out of fibrin, he is clearly in error (that is, in assuming the presence of actual vegetable micrococcus), for as soon as the slightest congestion is established and before the membrane begins to form, fibrin is exuded from the capillaries into the interstitial spaces of the tissues, and between the epithelial cells, where it commences at once to coagulate into granules, and it is these granules of fibrin that he has mistaken for micrococcus. Said granules are certainly there as early as he claims bacteria to be there and he must account for them, and when he has done this he will find no need to account for them by calling them what they are not.

Another quotation from Oertel will, perhaps, show this question in a still clearer light. In speaking in general of bacteria in diphtheria, he says:

"If the disease increases in intensity, we can always demonstrate a progressive increase of these organisms in the infected parts, and in the discharge from the fistula, established by cutting into the trachea. I have repeatedly demonstrated a rapid and great increase of micrococcus and bacterium termo, a short time before the formation of a diphtheritic layer on the edges of the wound and the occurrence of consecutive symptoms."

Of course "a rapid and great increase" of formo resembling "micrococcus and bacterium termo," could be demonstrated "a short time before the formation of a diphtheritic layer on the edges of the wound," simply because fibrin had to coagulate into granules and fibrils there in order to form the diphtheritic layer, or membrane, on the edges of the wound. There could have been no membrane formed there, but for the fibrin going through these preliminary stages of its organization; and the great error has been in calling these granules and fibrils of fibrin micrococcus and bacterium termo, that is, vegetable parasites, which could not grow, or even live a day, under such circumstances.

Let us have this question settled upon what we know to be scientific facts, and not upon guess-work, or upon unscientific conclusions.

A CONTRIBUTION TO THE STUDY OF BLEPHARITIS CILIARIS FROM AMETROPIA.

By GEORGE P. HALL, M.D.,
GALVESTON, TEXAS.

THE etiology of ciliary blepharitis, and especially its connection with the different forms of ametropia, has of late years attracted considerable attention from ophthalmologists, who, it seems, are much divided in opinion—some maintaining the disease is largely due to the refractive errors so often associated therewith; others that the connection is merely a coincidence, and not etiological. In the majority of the leading text-books no allusion is made to ametropia as having any bearing in a causative way on blepharitis. Dr. Mittendorf* advises us on this point, but it is, I believe, not mentioned in the works of Wecker, Stellwag, Donders, nor Wells. Dr. A. Alt† has studied the subject, and has given a tabulated statement of forty-eight cases of blepharitis, of which thirty-nine were emmetropic, five myopic, three hypermetropic, and one astigmatic. In estimating the refraction in these cases Dr. Alt fails to mention the use of atropia, so we are left to infer that he did not paralyze the accommodation in any of them. Studied with a view to determine if it be a fact that inflamed lids do really depend in some cases on uncorrected errors in refraction, the value of Dr. A.'s statistics is, to say the least, lessened by his failure to use atropia, for we all know that many hyperopic eyes do not manifest any H., and Dr. Agnew‡ has demonstrated "the insufficiency of the ophthalmoscope as the sole test of errors of refraction." Dr. F. C. Hotz§ records eighteen cases observed by him in private practice. Of these, four were hyperopic, one myopic, and one astigmatic. Dr. H. also tested the refraction in his cases without atropia. Dr. Erisman has reported some cases, how many I do not know, not having had access to his paper. Dr. D. B. St. J. Roosa, in a paper read before the International Congress of Ophthalmology in 1876, tabulates thirty-one cases occurring in his private practice. Of the thirty-one, twenty-six were ametropic. Dr. R. states that he used atropia whenever it was allowed. Subsequently the same author gave an additional table of forty-eight cases observed at the Manhattan Eye and Ear Hospital, showing ametropia in forty-two. Later on he adds a third table‖ of forty cases occurring in his private practice since his first report, showing thirty-eight ametropic cases.

To the above I add a report of ten cases as given below.

CASE I.—Miss L. E——, aged twenty-one, has had blepharitis for eighteen months. Has asthenopia accommodativa and irregular astigmatism with V.=$\frac{20}{20}$ in each eye. This case proved very obstinate, and nothing but atropia seemed of any benefit. I finally lost sight of her.

CASE II.—C. W——, colored, eight years of age. Blepharitis has existed probably two years. No estimate was made of the refraction. The lid trouble yielded very slowly, but completely, to appropriate treatment.

CASE III.—Miss E. T——, aged twenty-five. Lid disease has existed three months. V.=$\frac{20}{20}$; under atropia, $\frac{20}{30}$ w.+1 s.* Muscles and A. normal.§ Ordered +.75 s., which, with simple local treatment, gave permanent relief.

CASE IV.—J. T——, aged thirty. Blepharitis recent. V.=$\frac{20}{40}$. O.D.V.=$\frac{20}{30}$ w.—2.5 s.⌒—.5 cy.; axis, 125°. O.S.V.=$\frac{20}{30}$ w.—3 s.⌒—.5 cy.; axis, 90° Very slight change under atropia. The lid trouble yielded kindly.

CASE V.—Miss Josie O——, aged twenty-three. Blepharitis for one year, with accommodative asthenopia. O.D.V.=$\frac{20}{30}$: $\frac{20}{20}$ w.—$\frac{1}{16}$ cy.; axis, 180°. O. S.V.=$\frac{20}{30}$: $\frac{20}{20}$ w.—$\frac{1}{24}$ cy.; axis, 175°. In this case homatropine hydrobromate was the mydriatic used.

The above glasses were ordered with relief to all unpleasant symptoms.

CASE VI.—Miss B. F——, aged twenty-two. Has complained of inflamed lids for some months. V.=$\frac{20}{30}$; under homatropine, sunk to $\frac{20}{100}$: $\frac{20}{30}$ w.+$\frac{1}{12}$ s. ⌒+$\frac{1}{12}$ cy.; ax., 45° in O.D.; $\frac{20}{20}$ w.+$\frac{1}{12}$ s.⌒+$\frac{1}{12}$ cy.; ax., 120° in O.S. Ordered +$\frac{1}{12}$ s., combined with full cylindrics. Miss F—— derived great satisfaction from the glasses, and the blepharitis disappeared.

CASE VII.—G. D——, aged ten. Had blepharitis three years ago, which was apparently cured. Two months ago it returned, and compelled him to quit school. V.=$\frac{20}{30}$; under atropia, O.D.V=$\frac{20}{70}$ w. +1.25 s. O.S.V.=$\frac{20}{70}$: $\frac{20}{30}$ w.+1.25 s. He was given + 1 s. for each eye, and shortly afterward resumed his school duties.

CASE VIII.—Mrs. N. D——, aged thirty-two. Has recurring attacks of blepharitis, with styes. O.D. V.=$\frac{20}{30}$; under $\frac{20}{80}$: $\frac{20}{30}$ w.+.75 s.⌒+.75 cy.; ax., 90°. O.S.V.=$\frac{20}{30}$: atropia $\frac{20}{80}$: $\frac{20}{30}$ w.+1 s.⌒+.50 cy.; ax., 95°. The above formula was somewhat modified and glasses ordered. This patient also suffered from asthenopia, which was improved, though not altogether relieved.

CASE IX.—Miss A. C——, aged eighteen. Has been greatly annoyed by blepharitis, with styes. V.=$\frac{20}{40}$; under homatropine V.=$\frac{20}{80}$: $\frac{20}{30}$ w. +1.25 s. Miss C—— was unwilling to use glasses even for study, which she was finally forced to quit temporarily. At last account she was improving.

CASE X.—H. P——, aged twenty-four. Has had blepharitis for two years. Has been treated in the usual local way without marked benefit. V.=$\frac{20}{30}$; under atropia, O.D.V.=$\frac{20}{30}$: $\frac{20}{20}$ w.+$\frac{1}{12}$ s.⌒+$\frac{1}{16}$ cy.; ax., 25°. O.S.V.=$\frac{20}{30}$: $\frac{20}{20}$ w.+$\frac{1}{12}$ s.⌒+$\frac{1}{16}$ cy.; ax., 180°. Has some asthenopia. Ordered the above formula for near work. The refractive error is here very slight, but serves well to illustrate the value of correcting-lenses. The blepharitis soon disappeared, and the patient, thinking himself well, ventured to lay aside his glasses. In three weeks he returned, for the disease was reappearing. Kept him under atropia for over two weeks, when the blepharitis again disappeared, after which he used his glasses steadily for near work. Result in every way satisfactory.

Summarizing, we have of Dr. Alt's cases eighteen per cent. ametropic, Dr. Hotz, thirty-three, Dr. Roosa's, eighty-eight, and of my own ninety per cent. My table is, it is true, not very large, but it is of value, inasmuch as all but one of the cases were observed under the full influence of a mydriatic, and their refraction carefully estimated. Dr. Alt's cases certainly show a small percentage of ametropia, and Dr. Hotz's do not show a large one; but are we to accept these statistics as indicating

* Diseases of the Eye and Ear, p. 27.
† Arch. Ophthalmol and Otol., vol. vi., p. 180.
‡ Trans. Am. Ophthalmolog. Soc., 1880.
§ Chicago Med. Jour. and Exam., April, 1878.
‖ Ophthal. and Otic. contributions by Drs. Roosa and Ely.

* Metric system.

the real refractive condition of eyes in which no mydriatic was used? For my part I agree entirely with Dr. Roosa, who expresses his "unwillingness to accept statistics made up in this way." Dr. H. even goes so far as to acknowledge that, had he used atropia, some cases might have shown a slight degree of hypermetropia. He does not believe that refractive errors play any part in the causation of blepharitis. Dr. H. also seems to think there is no strain on a myopic eye unless improper glasses are used. The majority of ophthalmologists will probably not agree with him in that view.

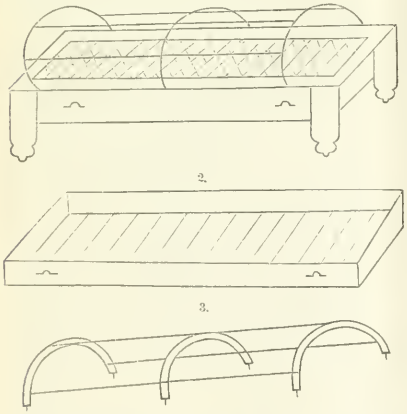
If we accept the two first tables as they are, and take the sum of the four, we have altogether 195 cases of blepharitis ciliaris, of which 130 are associated with ametropia. This is about sixty-six per cent., which fact is certainly quite remarkable, if it be a mere coincidence, as some would have us believe.

In conclusion I will say that I am fully convinced that ciliary blepharitis is not unfrequently caused by the long-continued strain resulting to an eye from an uncorrected error in its refraction.

REDUCTION OF TEMPERATURE BY THE USE OF DRY COLD.

By J. W. STICKLER, M.D.,
ORANGE, N. J.

My reason for calling the attention of the profession to this method of reducing supra-normal temperature is founded on the conviction that by its use the same result may be attained as in the employment of cold water, with less inconvenience and



risk to the patient. The diagram above represents the bed which I have designed, as a convenient means of applying the cold air. The bed consists of three separate parts: 1, the bedstead proper; 2, an ice-drawer; 3, a crib to support the bedclothes. The bed is made of wood, having a framework six feet long and two feet six inches wide, supported on legs eighteen inches high The open space included between the four sides of the bed is provided with a network, or springs, upon which the patient lies. The drawer is of the same length and breadth as the bed, and eight inches in depth, its inner side having a zinc plating. In the centre of the floor of the drawer there is an opening for the escape of water. The drawer has a sliding motion, and can be removed from the bed. The crib is similar to those in common use in the hospitals. When it is desired to reduce a fever temperature, the following plan may be adopted: after placing a pillow at the head of the bed, put the patient wrapped in a blanket or sheet, upon the bed, then adjust the crib and cover it with a blanket and the bedclothes, taking care to have them drop over each end of the crib, in order to exclude as perfectly as possible, the warm air of the apartment. An ice-bag should be applied to the head to prevent a determination of blood to that part. Next, fill the drawer with the frigoritic mixture, consisting of about fifty pounds of ice, well cracked, mixed with about ten pounds of rock salt, covered with a sheet or blanket. The drawer having been put into its place under the bed, the patient will be confined in a space, whose temperature, according to observations made, will fall to 48° F. in three-quarters of an hour. This temperature can be maintained at least two hours without renewing the ice and salt. In places where such a bed could not be made or procured, one similar in principle could very easily be improvised, in the following manner: Put the cooling mixture into any receptacle at hand, large enough to close in the space under the bed, or use several small vessels, observing the precaution to have such vessels in contact with the slats or springs, with no interspaces for the admission of warm air. The crib may be made of barrel-hoops connected at proper distances by means of laths or other suitable pieces of light wood. Such a contrivance would answer the purpose of the bed first described.

I suggest the use of cold air in the place of cold water, because—

First.—Cold air acts continuously with *equal* intensity upon all parts of the exposed surface. This is not true in the case of effusion, for whether the application be intermittent or continuous, the maximum effect must obtain at and near the point where the cooling agent first comes into contact with the body. In the use of the bath, unless the required temperature is secured before immersion of the patient, the same is true, for on the addition of ice or cold water to produce a lower temperature, there must be for a time, different degrees of cold to which the body is exposed, hence the liability to chilliness and shock greater than when air of uniform temperature is used.

Second.—After having the cold air applied, the patient need not be removed from the bed, as proper clothing may be added, and the drawer containing the cooling mixture withdrawn.

Third.—There is no wetting of the patient, with subsequent drying.

Fourth.—The process is much less troublesome than the use of cold water.

After operations upon women, for the removal of abdominal tumors, this method might have a great advantage over effusion or bath, as the patient may be placed upon the bed, and remain there till recovery, the cold air being applied when necessary, in the manner indicated. In many cases of sunstroke, in which there is excessive heat of the skin, the benefit to be derived from this plan of treatment seems manifest. To maintain a moderate degree of cold, place a thin mattress, or folded blanket under the patient, leaving the crib covered as before. In this way the temperature of the bed is so modified

as to render it safe for the patient to remain in it indefinitely. This fact recommends its use to a large class of patients who have enough fever to induce restlessness and wakefulness, for in such a bed their condition is not aggravated by the influence of warm air and heated bedclothes, both of which very often have a pernicious effect on the patient. It seems that its range of application may be quite as extensive as that of any present method, and it may be mentioned here that the bed, without any alteration, may be used to induce diaphoresis, by simply filling the drawer with hot water, kept up to a temperature of 212° F., by the use of an alcohol lamp underneath the drawer.

Reports of Hospitals.

THE USE OF IODOFORM IN BRITISH HOSPITALS.

(From our London Correspondent.)

This substance is now extensively used in Great Britain. It is chiefly employed as an external application, but is also given internally by a few physicians.

Locally, it is used for soft and hard chancres, syphilitic and other ulcers, cancerous sores, as a dressing for wounds, eczema, impetigo, lupus, laryngeal and pharyngeal affections, mammary and other tumors (to promote absorption), hemorrhoids, onychia, etc.

Internally, it is given mainly for syphilitic affections. Cases of poisoning from its use have been reported from the continent, but none have as yet occurred in Great Britain. No case of iodism has yet been published as resulting from its use.

The methods of employing it by different physicians and surgeons at several of the hospitals are briefly summarized below.

At University College Hospital, Mr. Berkeley Hill uses it a good deal for soft chancres. He recommends that it should be applied in the form of powder twice a day, the sore having been previously washed and dried. Some lint or cotton-wool is then applied, and over this a piece of oil-silk; in some cases, *e. g.*, over external parts such as the groin, Mr. Hill also prescribes an ethereal solution. In either case, he does not advise its use when the sore is inflamed. For hard chancres he recommends powdered iodoform as a local application every six hours, care being taken to keep the sore clean. Mr. B. Hill has also used it internally in cases of syphilis during the last few years. Mr. Godlee employs it for eczema and some cases of lupus. Ten grains of iodoform and a drachm of oil of eucalyptus are made into an ointment with an ounce of vaseline. Dr. Crocker applies it in cases of eczema attended with offensive discharge. He uses it both combined with eucalyptus as above, and also as a simple ointment made up with lard (ten grains to the ounce). He finds the discharge becomes much less offensive under its use.

At King's College Hospital, Mr. Watson Cheyne employs in cases of gonorrhœa soluble bougies containing iodoform and oil of eucalyptus. Mr. Cheyne claims that by this method gonorrhœa may, in many cases, be arrested in the first stage. Mr. Cheyne believes in the specific nature of the gonorrhœal discharge, and considers that these bougies act by destroying the germs.

At Charing Cross Hospital it is much used as an application to soft chancres by Mr. J. H. Morgan and Mr. Astley Bloxam. Mr. Morgan believes it to have a detergent action on foul sores, but does not think it has a direct healing action. He informed the writer, however, that he recently had a case in which he removed a cystic tumor from the neck (not antiseptically), and, after washing the wound out with carbolic lotion, scattered some powdered iodoform over its surface, The edges were then drawn together, covered with some more iodoform, and then covered up. On removing the dressings in a few days, the wound was found to have healed by first intention. Where the smell is an objection to its use, Mr. Morgan employs it mixed with an equal bulk of tannin.

At the Lock Hospital, Mr. Astley Bloxam employs iodoform for both soft and hard chancres. In the latter case he combines its local application with the internal administration of mercury.

At the London Hospital it is used (powdered) as a dressing for wounds. Mr. Rivington employs it for this purpose somewhat extensively. Mr. Reeves frequently uses it as a local application to the ulcers met with in the later stages of syphilis. From the hospital records it appears that about one-third of the cases now under Mr. Reeves are using iodoform in one way or another. As he uses it mainly for syphilis, the great prevalence of the disease at the East End is only too apparent.

At the British Hospital for Diseases of the Skin, Mr. Balmanno Squire prescribes it as a local application for the contagious impetigo of young children. He directs that the scabs should be first softened and removed, the surface gently dried, finely powdered iodoform (diluted with starch if necessary) dusted over the surface, and lastly a thin layer of glycerine painted on. This should be done every two hours. Mr. Squire has found this induce a marked improvement within even a few days, the discharge quickly changing its character from purulent to serous.

At the Hospital for Diseases of the Throat, iodoform is a favorite remedy. Some time since it was (dissolved in ether) freely used as a spray in ozœna, and other nasal cases. Some of the staff here also mix it with other substances, to apply to the interior of the larynx by insufflation. In the Pharmacopœia of this hospital there is a formula, introduced by Dr. Whistler, for pastilles of iodoform, each containing one grain with a basis of glycerine and gelatine. These are much used in syphilitic eruptions of the mouth, tongue, and throat. There is also a form for nasal bougies, each containing half a grain, and an "insufflation" for ear cases, introduced by Dr. Woakes. It is, perhaps, most extensively used at this hospital by Dr. Prosser James, he having been the first to recommend it as a local application in diseases of the throat and nose, and also as an internal remedy in syphilis and some other diseases. He applies it either pure or diluted, according to circumstances, with an indifferent powder, such as starch or lycopodium, to syphilitic ulcers in the mouth and pharynx; also by means of a proper insufflator, to ulceration in the larynx, either syphilitic or tubercular. In the latter case, mostly mixed with a small quantity of morphia, and diluted with an equal part or more of starch. In the pharynx, he generally employs it pure. Some time ago he used it freely in a case of cancer of the tonsils, and it seemed at first to afford considerable relief, but after a while lost its power. In another case of

cancer extending on to the tongue, it produced so much pain, even when mixed with morphia, that it was discontinued. In all these cases Dr. James insists on the necessity of reducing the iodoform to the finest powder. Internally, Dr. James has used it for many years—indeed from its first introduction. He gave it in one-grain pills, commencing with three daily, and gradually increasing to nine a day, or more. Of late years, he uses two grain pills, and increases the number gradually, as in the former case. In the hospital Pharmacopœia these pills are made with one grain of sugar of milk and sufficient glycerine of tragacanth to make a pill of proper consistence. Dr. James remarked one day at his clinic that, in private practice, the smell of the substance being a disadvantage, he conceals it by mixing the iodoform with equal weights of balsam of Peru and liquorice powder. This forms a good, firm pill, without further excipient. He gives it thus internally in tertiary syphilis, as it rapidly arrests ulceration, and, contrary to what is stated in a recent text-book, it is *not* so likely as potassium iodide to produce iodism, and he has never known it do so, although he has continued the pills for months together. He also uses the drug internally for chronic glandular enlargements and other strumous manifestations; also in lupus and lupoid affections.

At Edinburgh, iodoform is used largely in the Royal Infirmary, and with very good results. Mr. Chiene uses it in his wards for nearly all forms of sores, more especially for specific sores, syphilitic and strumous ulcers. The part is either dusted with the powder, or else the iodoform is made into an ointment, and thus applied. Mr. Chiene sometimes applies a charcoal poultice, to deodorize the surface before applying the iodoform. He employs it in this way in large syphilitic ulcers and gummata, thus bringing the part into a healthy condition. It is also used in cutaneous diseases.

Dr. T. R. Fraser, the Professor of Materia Medica in the University, recommends it in his lectures as a local anæsthetic and antiseptic in cutaneous diseases, syphilitic ulcerations, enlarged joints, and also glandular enlargements. He also recommends it in the form of a suppository (each containing seven grains), in fissure or irritation of the anus, and in hemorrhoids. For an ointment he advises one to one and one-half drachm of iodoform to an ounce of simple ointment. Dr. Fraser believes that iodoform possesses all the advantages of iodine, without the local irritating properties of the latter.

In the maternity department of the Royal Infirmary, Dr. A. G. Miller uses it for soft chancrous sores in women, in the following method: Some powdered iodoform is placed in a small muslin bag, and given to the patient, who is directed to apply it herself to the affected part. Dr. Miller uses it extensively in these cases.

A Unique Case—Bulbar Paralysis Cured.—Dr. Heller, of Teplitz, reports a remarkable case of a patient suffering from, as he affirms, true bulbar or glosso-labio-pharyngeal paralysis, who was nearly cured in a few months by the daily use of baths alone. The patient had suffered for about nine months before he was put under this treatment. He could then hardly swallow at all, and could not speak intelligently. His improvement began within three weeks. The case is very carefully reported, and there seems to be no room for error in diagnosis.—*St. Petersburg Medicinische Woch.*

Progress of Medical Science.

Treatment of Cutaneous Pruritus.—General itching of the cutaneous surface, is usually due, according to Dr. Purdon of the Belfast Hospital for Skin Diseases, to derangement of the liver from abuse of alcoholics, or from jaundice. For such diseases the "blue pill" and seidlitz powder are the accepted popular remedies. In any such case he finds it most desirable to give a hepatic stimulant, and he recommends "rag-weed," under the form known as *Succus senecionis Jacobæ*, as prepared by Grattan & Co., of Belfast. [There is an undoubted error in the English name, the writer manifestly intending to use the word "rag-wort," for a plant of the genus *Senecio*, the rag-weed belonging to the genus *Ambrosia*.] The dose is from one teaspoonful to two tablespoons, either with or without a teaspoonful of sulphur, and should be taken early in the morning. As regards local treatment, he advocates the Turkish bath, or aponging of the body with vinegar or borax, which give relief for some hours. That most annoying variety, pruritus ani, is associated, as a general rule, with portal derangement, and often occurs in connection with piles. In such cases he succeeds with tar locally, while internally is given podophyllin, rag-wort, or black pepper. In pruritus vulvæ he finds the trouble may be sometimes traced to the oidium albicans, and he recommends injections of hot water and the application of sulphurous acid locally. Careful diet, and the use of lactic acid in conjunction with the above will give temporary relief, at any rate. In pruritus seroti, which is usually due to urethral troubles, he uses the catheter and iodoform suppositories. Pruritus of any kind, whether general or local, is always due to some special constitutional difficulty.—*The Practitioner*, January, 1882.

Tripier's Amputation of the Foot.—Mr. P. T. Hayes, of Kingston, has now operated twice according to the plan advocated by Tripier, of Lyons, the first case having been briefly reported in the *British Medical Journal*, February 26, 1881, and being the first operation by this method upon the living subject. Encouraged by the favorable report received from this patient, some eighteen months after the operation, he has repeated it with good success. Tripier's plan was designed to overcome the disadvantages resulting from Chopart's medio-tarsal disarticulation, in which malposition of the foot-remains often resulted. Tenotomy in the hands of Petit and Bouvier having failed to overcome the deformity, re-amputation was not infrequently done, and in France, at least, the operation finally met with disfavor. Guided by the dissections of Malgaigne, Sédillot, and Legouest, who attributed the "lark-heeled" deformity and frequent valgus to mechanical pressure between the bodily weight transmitted through the tibia on the one hand, and the resistance of the ground on the other, Tripier conceived the plan which has assumed his name. The different steps in the procedure are as follows:

He commences with a skin incision at the outer edge of the tendo Achillis, on a level with the external malleolus. The line of incision is at first downward and forward, and afterward forward, so as to pass two fingers' breadth below the malleolus, and then to approach by a finger's breadth the upper part of the base of the fifth metatarsal bone.

From this point the incision is to be carried upward, forward, and inward, so as to reach the inner margin of the tendon of the extensor hallucis proprius, just behind the first tarso-metatarsal articulation. The knife should now be made to cut downward and forward, so as to enter the sole of the foot a finger's breadth in front of the dorsal wound. The incision is then to be carried, with a gentle forward curve, outward and backward, until it can be made continuous with the first portion of the wound below the outer malleolus. The divided integument having undergone some degree of retraction, the dorsal and plantar structures are to be divided half-an-inch behind the superficial wound; the soft parts are then to be separated from the bones, extreme care being taken to preserve uninjured the vessels contained in the inner part of the plantar flap. The surgeon will find it convenient at this stage to disarticulate the cuboid and scaphoid from the os calcis and astragalus, just as in Chopart's amputation. Having done so, he will proceed to divide and separate the periosteum from the under surface and posterior extremity of the os calcis, up to the level of the sustentaculum tali, where the bone is to be sawn through, in a direction from behind and within, forward and outward, so as to leave a surface which will be at right angles with the axis of the tibia, when the limb is caused to assume the ordinary position for walking and standing. All sharp bone-edges and angles should now be rounded off. The posterior tibial nerve is to be exposed in the plantar flap, and divided as high as possible, with a view to prevent risk of neuroma. The vessels having been secured, and drainage-tubes having been inserted, the flaps are to be brought together and the limb so dressed as to secure moderate flexion of the ankle-joint during the period of repair.

The following advantages claimed for the operation are:

First.—That comparatively short flaps will be found sufficient to afford complete covering for the bone surfaces.

Second.—The tendons will have been divided well in front of their sheath-connections with the astragalus and os calcis, so that when they form new attachments the muscles which act upon them will be capable of regulating flexion and extension of the ankle-joint.

Third.—Section of the os calcis will at once prove whether the bone is healthy throughout, and in the event of there being any evidence of central disease the operation can very readily be converted into a disarticulation at the ankle.

Fourth.—Removal of the lower part of the os calcis in the manner described leaves an extremely broad, even surface, which at once secures the patient against risk of subsequent distortion and causes pressure to be diffused over such a considerable extent of soft tissue as to render the chance of ulceration well-nigh impossible. Besides other advantages attendant upon this operation, the wound heals rapidly, and within a very short space of time the limb becomes capable of sustaining the entire weight of the body.

A New Mydriatic.—Emmert finds the hydriodide of hyoscine superior as an agent for dilating the pupil to any of the drugs previously employed for this purpose, such as atropine, duboisine, hyoscyamine, etc. The alkaloid is obtained from the so-called amorphous hyoscyamine, and forms with hydriodic acid well-defined crystals, while the muriate is amorphous. The chief advantages of this preparation, as compared with atropine and duboisine, are that it acts much more promptly and powerfully. Using the eye of a rabbit for experiment, the results were as follows:

	Half per cent. solution of atropiæ sulph.	solution of hyoscin. hydriod.
Width of pupil (at beginning of experiment).	2 5 mm.	2.5 mm.
" " 5 minutes later.....	2.5 mm.	3.0 mm.
" " 10 " "	8.0 mm.	10.0 mm.
" " 15 " " (maximal dilatation)...	10.0 mm.	10.5 mm.
	One-tenth per cent. solution of atropiæ sulph.	solution of hyoscin. hydriod.
Width of pupil (at beginning of experiment).	2.5 mm.	2.5 mm.
" " 10 minutes later.....	2.5 mm.	3.0 mm.
" " 13 " "	4.25 mm.	9.5 mm.
" " 17 " "	6.5 mm.	10.5 mm.
" " 25 " " (maximal dilatation...	9.5 mm.	10.5 mm.

Upon the author using a half per cent. solution of atropiæ sulph. for the left, and a one-tenth per cent. solution of hyoscine hydriod. for the right eye, the results were as follows:

	Left eye.	Right eye.
Width of pupil (before experiment)...	2.5 mm.	2.5 mm.
" " 14 minutes later.....	2.5 mm.	4.0 mm.
" " 20 " "	3.5 mm.	
" " 25 " "	6.5 mm.	8.0 mm.
" " 56 " " (maximal dilatation)...	8.0 mm.	8.5 mm.

Similar results were obtained in other individuals with diseased eyes. Thus, in several cases of inflammatory affections of the cornea, where atropine and duboisine had produced no dilatation, hyoscine acted promptly and favorably. Moreover, in cases of recent and old iritis, with posterior synechiæ, hyoscine invariably caused dilatation of the pupil, and frequently rupture of the adhesions. Again, the hydriodide of hyoscine does not irritate the conjunctiva. Stronger solutions than a half per cent. should not be employed, as they have given rise to symptoms of poisoning, consisting in dryness of the throat, disturbances of vision, hallucinations, delirium, and unconsciousness. In fact, even the half per cent. solution must be used with caution, as in two of the author's cases general symptoms made their appearance.—*Correspondenz-blatt fuer Schweizer Aertze*, January 15, 1882.

Gastric Lesions in Bright's Disease.—The gastric symptoms, such as nausea and vomiting, which so frequently occur in cases of Bright's disease, have often been attributed to retention within the system of certain constituents of the urine, which act either by inducing some chemical alteration of the gastric secretion, or perhaps by exciting, in some not clearly understood way, a change in the physiological movements of the stomach. Little, if any, attention has been devoted to the study of the anatomical conditions underlying these symptoms. Sée assumes that the continued secretion of urea by the gastric mucous membranes gives rise at first to functional disturbances only, but finally, ulcerating lesions may develop. Hlava and Thomayer examined the stomach, post-mortem, in many cases of Bright's disease. Their conclusions are thus stated: 1. True interstitial gastritis not infrequently develops during the course of acute and chronic nephritis. 2. It cannot be demonstrated that this pathological condition is caused by uræmia, nor that it is directly dependent upon the presence of the renal affection. It is possible that both the gastric and the renal disease arise from the same exciting causes, but this is also as yet a mere assumption. 3. In numerous instances where no dys-

peptic symptoms were present during life, the gastric mucous membrane was found healthy. It is therefore probable, they think, that many of the cases of dyspepsia which do occur during the course of nephritis, are dependent upon an interstitial gastritis.—*Allgemeine Med. Central-Zeitung*, January 18, 1882.

A Contribution to the Treatment of Fractures of the Thigh in Childhood.—In the *Berliner Klinische Wochenschrift*, of February 28, 1881, Jacubasch published an adverse criticism on the treatment of fractures of the thigh in very young children by vertical extension of the limb, claiming that this method was often productive of a fatal result by reason of hypostatic pulmonary affections. According to Kummel this accident is more imaginary than real. It was not met with in any of the forty cases treated by vertical suspension under the charge of Schede and Martini. In other respects the method, he thinks, is far superior to any other plan of treatment. It was applied in all cases of simple fracture of the thigh occurring in children under two years of age; in older ones only when horizontal extension had to be abandoned because of frequent and unavoidable soiling of the dressings by excrement. The results were invariably good. In only one instance was shortening detected, and this did not exceed one centimeter. On the contrary, a lengthening of the fractured extremity to the extent of one to at most two centimeters was observed a few times, but this elongation disappeared soon after the patients recommenced to walk. Although it might have been *à priori* supposed that rotary dislocation would be likely to occur, this was not the case in any instance, even when the children were very active. In otherwise healthy and well-nourished children consolidation was usually sufficiently firm after the lapse of three weeks to allow of the removal of the apparatus. In rachitic or otherwise debilitated patients consolidation was delayed for a period of ten to twelve weeks or longer. The method of extension was the ordinary one, namely by strips of adhesive plaster, not passing above the point of fracture, and retained in position by a flannel or other roller bandage.—*Berliner Klinische Wochenschrift*, January 23, 1882.

Curara in Hydrophonia.—Penzoldt reports a case of rabies in a boy of eleven years, in which very large doses of curara were administered, at first with apparent benefit, but later without the slightest palliation. The drug was given hypodermically at first, in doses of 0.005 gramme, rapidly increased to 0.02 gramme, and at short intervals. Altogether, in twenty-six hours, 0.435 gramme was employed, of which 0.36 gramme was used in ten and one-half hours. It was not thought advisable to push the drug any further, as symptoms of paresis of the respiratory muscles made their appearance, although there was no appreciable paralysis of the voluntary muscles. The solution of curara employed was known to be active, a single dose of 0.02 gramme, previously injected in a dog weighing 6.5 kilogrammes having quickly caused the death of the animal. Penzoldt regards the case of hydrophobia, reported by Offenberg as having been cured by curara, as an instance of lyssophobia, the patient having some years before nursed an individual during a fatal attack of genuine lyssa. The suspected animal was killed immediately after biting the woman. The symptoms were somewhat similar to those of hydrophobia, very much modified by hysteria. In conclusion, Penzoldt believes that curara has some value in alleviating the œsophageal and respiratory spasm, but exercises no directly curative influence on the disease. It should certainly not be used to the exclusion of chloral, chloroform, etc., the last mentioned being invaluable from a humanitarian standpoint, if only for procuring euthanasia.—*Berliner Klinische Wochenschrift*, January 23, 1882.

Iodoform-Poisoning.—Of late numerous instances of serious and fatal intoxication after the free use of iodoform in the treatment of fresh wounds have been reported. Mikuliez observed a fatal result after the employment of forty grammes of the powdered drug. Schede believes that many individuals exhibit an idiosyncrasy in this respect, which is the more dangerous as the symptoms of poisoning often develop with great intensity without any premonitory signs, and cannot be arrested by the prompt removal of the agent from the wound. Schede thus tabulates his experience: 1. Slight deviations from the normal conditions occur very frequently under the guise of a marked elevation of temperature shortly after the application of iodoform; subjective sensations do not accompany this febrile rise. 2. In another series of cases, whether fever be present or not, whether the wounds are small or large, recent or old, the patients are depressed, are inclined to silence, or are easily led to weep, complain of headache, loss of appetite, or of a taste of iodoform in whatever is eaten. The pulse is usually accelerated and is small, soft, and compressible. These symptoms may develop after the employment of iodoform-gelatine sticks, but rapidly disappear after the removal of the cause. 3. Associated with a continued or transient elevation of temperature, the pulse becomes very frequent, as high as 150 to 180 in the minute, both in children and adults; at the same time the patients may feel comparatively well; they are restless, perhaps suffer from a vague sense of discomfort or loss of appetite; this condition may occur after the iodoform dressing has been well borne for several weeks, and demands the immediate removal of every trace of iodoform from the wound, otherwise there is imminent danger of the supervention of alarming symptoms. 4. With enormous frequency of the pulse there is a corresponding elevation of temperature, which signs, combined with clearness of the mental faculties, a moist red tongue, a septic condition of the wound, and the total absence of positive changes on post-mortem, distinguish this state from septicæmia. Schede met with an instance of the above; the patient was a robust young man in whom a suppurating bubo of the groin following gonorrhœa had been extirpated, and the wound dressed with iodoform by some physician; the removal of the dressings was of no avail, the patient dying a week later. 5. In other cases, after exhausting operations, but where the pulse has remained strong, the plugging of the wound with iodoform is followed by rapid and fatal collapse. 6. In other cases cerebral manifestations occur. In children these are liable to simulate an acute meningitis, yet on post-mortem examination the organs are found in an apparently healthy condition. In adults obscure cerebral disturbances may progress to a fatal termination, or may assume the guise of acute mania or a severe type of melancholia, with suicidal tendencies. According to Schede, no large fresh wounds should be treated with iodoform. Granulating wounds are more exempt from danger. Sticks of iodoformized gelatine are comparatively innocuous.—*Centralblatt für Chirurgie*, January 21, 1882.

Hayes on Excision of the Knee.—Mr. Hayes has recorded his experience on knee-joint excision during the past ten years of his practice. Of fourteen patients who underwent the operation for chronic progressive articular disease, eleven recovered with useful limbs. In three secondary amputation was required, and of these two died. The steps of the operation are as follows: Having flexed the leg moderately so as to define the posterior margins of the femoral condyles, he cuts from one of them to the other, straight across the ligamentum patellæ and into the joint. At this stage the patella may be dissected from its attachments, but if fixed to the femur its separation will probably be postponed until after division of fibrous connections between the femur and tibia. He prefers cutting through the lateral ligaments before proceeding to the division of either the normal or abnormal structures occupying an intra-articular position; also, when dealing with the latter, he keeps the leg strongly flexed, and directs the cutting edge of the knife against the articular surface of the head of the tibia rather than toward the ligamentum posticum. He never attempts to clear the posterior aspect of either the femur or the tibia before applying the saw, but severing the bone from before backward breaks through the posterior surface of each bone. This is done with a view to avoid injuring the posterior ligament and corresponding fibrous connections between the femur and tibia, it being an advantage to preserve, if possible, these tissues, as they not only assist to maintain contact between the sawn surfaces, but also, should suppuration occur in spite of antiseptic dressings, they will in all probability prove a barrier against the entrance and burrowing of pus into the popliteal space.

In putting up the limb he gives in detail the following steps to be adopted. Presuming that the operation has been performed under antiseptic methods, the spray should now be directed across the region of the knee, and to avoid any unnecessary wetting of splint, bandages, etc., carbolized sponges are to be maintained in contact with the angles of the wound, so as to absorb all blood-flow while the leg and thigh are being washed and bandaged.

The surgeon next applies a soft flannel roller evenly, but loosely, around the limb from the toes to a point about two inches below the inferior lip of the operation wound, and over this a second roller is to be adjusted, thus providing the leg with a sufficiently thick and soft covering. In like manner the thigh from the groin to a point about two inches above the wound is to be loosely encased with a couple of flannel rollers. The limb being ready for application of the splint, the patient is to be brought *thoroughly* under the influence of ether, so as to produce complete relaxation of the muscles. The splint consists of two concave pieces of perforated iron—the one moulded so as to fit the posterior aspect of the leg, and the other adapted to receive the posterior surface of the thigh. They are connected posteriorly by means of a strong, flat, but narrow bar of iron, so bent as to form an oblique step about three inches long, and having the end to which the leg-piece is attached exactly one inch in advance of that fixed to the thigh-piece. This apparatus is to be provided with pads arranged for leg and thigh—the leg-pad being made thicker below than above—and then it is to be carefully adjusted behind the limb. A soft pad is now to be laid in front of the the thigh, near its lower end, and upon this pad a concave piece of iron about 4 inches long by from 2½ to 3 inches wide, is to be placed.

The next step is to firmly secure the thigh in the upper part of the splint. This is done by encircling the splint and limb with a strong strap, which is to be tightly buckled across the upper part of the anterior small splint, whilst lower down the strap of a Petit's tourniquet is to be fixed, the brass of the tourniquet resting against the anterior splint. As both straps will have been drawn extremely tight it is clear that one or two turns of the tourniquet will firmly press back the lower end of the femur so as to render the anterior surface of that bone flush with the anterior surface of the tibia.

Entrusting the upper part of the limb to his assistants, the surgeon next proceeds to incase the foot in several turns of a gypsum bandage, which is to be carried upward, encircling the leg and lower part of the splint as high as the point at which the flannel bandage terminates. Whilst this is being accomplished the foot must be held at right angles to the leg, lest extension of the ankle should occur and prove a source of trouble at a later period. When the operator has satisfied himself that the limb has been properly arranged and secured, the wound is to be closed, while drainage is to be provided for by having short flanged tubes inserted either at the angles of the original wound or through button-hole apertures which may be made still farther back. After the application of antiseptic dressings, the limb is to be swung by means of a loop of calico passed behind the leg-piece of the splint and tied to the bars of a strong and high fracture-cradle. A foot-piece is found altogether unnecessary, as the gypsum bandage encircling the leg and splint constitutes a firm boot. Shortness of the thigh-piece, combined with suspension of the leg, enables the patient to assume the sitting posture, and change position without risk or discomfort.—*Dublin Journal of Medical Science*, February, 1882.

The Etiology of Puerperal Eclampsia.—Prof. T. Halbertsma, of Utrecht (*Volkmann's Sammlung Klinischer Vorträge*, No. 212), defends, in a slightly altered form, the theory concerning the causation of puerperal convulsions advanced by him in 1871. He believes that the majority of cases of puerperal eclampsia are due to the retention of urine caused by pressure or by traction upon the ureters. He refers the convulsions to uræmia, due to the deficient elimination of urea consequent upon excessive distention of the pelves of the kidneys. Dr. Halbertsma bases his theory upon the following facts: The urine of patients suffering from eclampsia is altered both in quality and quantity. The bladder is normal, and the kidneys usually too little diseased to occasion the symptoms; eclampsia is specially observed in twin pregnancies, and in old primiparæ, *i.e.*, in cases attended by stenosis or occlusion of the ureters from pressure. In certain cases an autopsy has demonstrated the existence of retention occasioned by compression of the ureters. The author claims that his hypothesis satisfactorily explains the sudden occurrence of convulsions at the end of pregnancy, and during or soon after labor, at times when the intrapelvic pressure or its after-effects are most marked. Dr. H. also admits the existence of another class of cases in which eclampsia is due to renal disease complicating pregnancy, but not caused by it.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, April 15, 1882.

STATE EXAMINATIONS FOR LICENSE.

As yet no active opposition to the proposed law for making State examinations for a degree compulsory has been developed. From a perfectly impartial standpoint, and on the assumption that the provision of the act may be properly carried out, there is but one opinion regarding the utility of the measure. In a word, the profession, as a whole—that part of it, certainly, not directly interested in the management of medical schools—are in favor of strict and independent examinations for the doctorate degree.

There are some schools in the State above the suspicion of granting diplomas to persons who are not properly qualified; but there are others not so scrupulous regarding those upon whom they may be empowered by their charters to grant licenses.

This is notoriously the case with certain irregular schools who fraudulently sell their diplomas. At present, there is no way of preventing these ostensibly respectable diploma mills from forcing upon the legalized practitioners of this State any number of disreputable and incompetent individuals who are privileged by law to trade upon the title of Doctor of Medicine. Indeed, it is loudly whispered that some of the regular schools are not free from the accident of occasionally at least graduating and licensing individuals who may not be able to pass a perfectly independent board. It cannot be said that reputable colleges would risk their good reputations by doing such a thing wilfully, but they certainly do it nevertheless, and there is not a graduating class that cannot number a due proportion of men who are entirely unfit, either by previous education, medical training, or clinical advantages, to practise the healing art. And yet the profession is expected to protect these men in their ignorance and receive them into full fellowship, ostensibly for the reasons that there is no better way of licensing men, and that any and every self-constituted medical school shall have its required patronage and prosper accordingly.

This is practically what the situation is, at present, with a profession already overcrowded and with medical schools too numerous to mention. The good intentions of the colleges are hardly to be taken into account as offsetting the possibilities of grave abuses of their present privileges. If a few of the schools are honest, there is no reason why all should be so.

Some of the leading colleges aim at a high standard, but others do not. All can advance their standard with benefit to the profession, but only a comparatively few make any pretensions to move in a direction tending to lessen the size of the classes. And yet the diploma from one college is as good as that from another, and the possessor is to be accepted and respected by a profession which is bound by a code to stand by him through thick and thin, to endorse his acts, good or bad, to throw a mantle of charity over his ignorance and protect his interests with the sacredness of obligation, which is understood to belong to medical brothers. When doctors were scarce, this was tolerable. The bottom limit of necessity in this regard has, however, been reached long ago, and now the yearly frothing over of medical recruits is noticeable by the most casual observer.

No great harm can come now to the country by lessening the supply of young doctors by creating a uniform standard of qualification and insisting upon enforcing its requirements. And this is one of the fundamental arguments in favor of compulsory State examinations, and must be so considered by every one not pecuniarily connected with a medical school. The time has passed when, for the sake of the prosperity of any medical school, the profession shall be forced to accept any and every graduate licensed by said school. On general principles the colleges should not be allowed to fix their own standards and then have the privilege of granting licenses founded on the same. At best it is the loosest possible way of doing business. Technically speaking it guarantees no qualification besides that which belongs to a standard that is essentially arbitrary and unreasonable. Consequently the profession at large are in favor of fixing a maximum degree of qualification, and of enforcing it by the compulsory examinations by State medical boards of examiners who shall be pledged to absolute impartiality.

As has been said before, this plan cannot possibly interfere with the mere granting of diplomas by the different colleges, but merely with the licensing of individuals to practise on their authority alone. Before that can be done, the actual value of the diplomas are to be duly tested by a State examining board.

It is scarcely to be expected that any respectable medical school will care to oppose a measure so obviously for the advancement of the general interests of the profession, and for the real good of all concerned. On the contrary, it is to the interest of the regular and honest colleges over the State to give the law their hearty support, caring only for the guarantee of the appointment of perfectly impartial examiners. The leading institutions can, if they will, be equal to any emergency in which they may be placed by the requirements of any examining board whatsoever, and the best school, the one whose professors have taught the most faithfully, and whose systems have been most comprehensive and perfect, will always be on the winning side as to the number of graduates who pass. The lesser one-horse institutions, not able to hold their own, must of necessity drop out of line. This is the proper way to effect the necessary reform. Compulsory State examination is a radical measure, but it is the only one which can be consistently advocated in the best interests of the profession at large, and even of the colleges themselves.

THE FUNCTIONS OF THE CEREBRAL CORTEX.

Professor Exner, of Vienna, has made a contribution to the subject of cortical localization, which is of unusual interest and importance. The method which he employed in his investigations was a new one. He collected over a thousand reported cases of brain lesions. Out of these he selected 169 as being sufficiently well described to suit his purpose. He then mapped out upon a model all those parts of the cortex which he found could be affected without necessarily producing any motor or sensory disturbances. The regions thus outlined were called "latent." Having mapped out his "latent" regions, he proceeded to study the cortical areas for the special muscle-groups and senses. He found that lesions in certain regions would in some cases produce particular paralyses or sensory disturbances; in other cases they would not. These regions he called relative "areas." Those regions, injury of which always caused a particular disturbance, he called "absolute" areas. In the "relative" areas there were points where lesions produced effects in a large per cent. of cases, and other points where symptoms were more rarely produced. Thus he could describe a "relative" area as being more or less "intense"—that is, more or less sensitive to injury.

With this explanation of the special terms our author adopts, we can understand the description given of his results.

The "latent region," in which injuries may occur without necessarily producing motor or sensory disturbance, differed slightly in the two hemispheres. On the right side this region included the whole of the surface except the precentral and postcentral (otherwise known as the anterior and posterior ascending) convolutions, the paracentral lobule, and a part of the convex and inferior surfaces of the occipital lobes.

On the left side the latent area was much smaller. The non-latent surface includes all the parts corresponding to those just mentioned and, in addition, all the parietal and most of the occipital lobes. In other words, the cortex of the left hemisphere can hardly be injured in any part except the frontal lobes without symptoms, by which we mean sensory or motor disturbances.

This greater sensitiveness of the left hemisphere is due to the fact that the visual centres are more developed, and widely diffused in it. As a whole, the ratio of sensitiveness, in the sense just described, between the left and right hemispheres is about as 3 to 2.

The different motor fields are located about as follows:

The "absolute" motor field for the upper extremities in the right hemisphere includes the paracentral lobule, the precentral gyrus, except its lowermost portion, and the upper half of the postcentral gyrus. The "absolute" motor field for the left hemisphere is nearly the same as for the right, but extends back farther and includes some of the superior parietal lobule. The "relative" fields for these extremities on both sides shade off with diminished "intensity" from the "absolute" centres.

The "absolute" centre for the hand is at about the middle of the precentral gyrus.

The "absolute" field for the lower limbs is very nearly the same as that for the upper. They do not differ very much on the two sides except that on the left the area is a little larger and is placed a little farther back, including more of the postcentral and less of the precentral gyrus.

The identity of the areas for upper and lower extremities is a very interesting fact, if it be a fact. Exner explains the phenomena of separate paralyses of arm and leg by stating that the areas for the arm are more sensitive than those for the leg. Lesions which are sufficiently destructive to paralyze the former would not necessarily affect the latter.

The facial nerves have an "absolute" field upon the left side, but only a "relative" field upon the right. It is situated at the lower part of the precentral and contiguous part of the inferior frontal gyri. On the left side the field is not only an "absolute" one, but it stretches farther back than does that of the right hemisphere.

The tongue has no "absolute" centre on either side. Its relative centre is near that for the face.

Exner's studies confirm the view that muscles which during life are innervated at the same time,

have a common centre on each side of the brain. Such muscles are those which move the eyes. When their centres are injured upon one side of the brain, the result may be a bilateral paralysis. But, as the centre on the other side is not damaged, this paralysis soon disappears. The frequent existence of temporary paralysis of the external and internal recti in cerebral hemorrhage is thus explained. This fact of a common centre can be used also to explain other paralytic phenomena.

The conclusions reached regarding the location of the speech-centre are somewhat different from those now accepted. There is, says our author, no "absolute" speech area. The most "intense" portion of the "relative" field is situated on the posterior part of the left inferior frontal convolution (the place to which the speech-centre is usually referred) and the contiguous part of the precentral gyrus. From here it extends back and down, including part of the upper temporal and part of the occipital lobes. The more a lesion approaches the "absolute" centre for the arm, the more likelihood is there of causing agraphia. The more the lesion encroaches on the upper temporal, the more probable is it that there will be word-deafness.

Before describing the sensory areas, we would call attention to the fact that Exner's studies confirm certain views regarding the relation of the motor-cells of the cortex to special groups of muscles. It is generally believed that the large motor-cells (cells of Betz) are connected with large muscles and control the grosser muscular movements. Now these cells are found particularly well developed along the greater longitudinal fissure in the paracentral lobule and upper parts of the ascending convolutions. And here we find the areas for the muscles of the extremities. On the other hand, the cells lower down on the convexity, are smaller and younger, and they correspond to the later developed and more specialized centres for the movements of the hand, face, eyes, tongue, and laryngeal muscles.

As regards the sensory areas, Exner makes the very interesting statement that the *tactile area*, or area for common sensation, is nearly identical with the motor areas for the extremities. This confirms also previous hypotheses that, while the motor fibres are connected with the large pyramidal cells of the third cortical area, the sensory fibres connect with the smaller cells of the fourth and fifth layers.

Regarding the visual centre, Exner confirms, to a certain extent, the views of Munk and the later experiments of Ferrier and Yeo.

There is, he says, no "absolute" visual centre. The most "intense" part of the "relative" area of vision is in the upper and middle occipital lobes, extending thence into the cuneus. The older view that the angular gyrus is the visual centre in man must, if we accept Exner's (and Munk's) conclusions, be modified or abandoned.

In conclusion, Exner claims to show that the right hemisphere contains more "intense" sensory areas than the left. It may also be more intimately connected with afferent impulses from the viscera. Lesions of it are more fatal. The view of Brown-Séquard, that the right hemisphere has more to do with emotions, receives some additional plausibility.

As regards the actual part which these cortical areas play in producing movements, Exner's studies corroborate the view that they are places in which there is an intermediation between afferent and efferent impulses.

They constitute the region where conscious and voluntary movements are organized and sent out, but not originated, properly speaking. Impulses from the lower or from the ideational centres are here brought systematized and then reflected down as voluntary movements.

The establishment of the view that the cortical areas are diffused and overlapping, not sharply defined centres, is an important one if it can be accepted. It must be remembered, however, that there are a good many possibilities of error in Exner's methods, since he used cases of cerebral tumors to work up. Some of his conclusions must be accepted, therefore, with considerable caution.

ATMOSPHERIC OZONE IN ITS RELATION TO DISEASE.

A COMMITTEE of the American Medical Association, through the agency of Dr. G. H. Long, of Chicago, has instituted a series of experiments regarding the amount of oxydizing agents (ozone, peroxide of hydrogen) and organic gases in the air. It is intended that the investigation shall embrace three classes of data: those concerning the existence of oxydizing agents, etc., in the air in different parts of the country throughout the year; those concerning the prevalence of acute diseases at the same time; and finally those concerning the daily meteorological conditions of the different places.

The scheme, as will be seen, is a comprehensive one and likely to bring out some facts of value in course of time. At present only experiments for testing the amount of ozone in the air have been instituted, and these for only a short time. The methods employed consist in the use of various test-papers which are exposed to the air. These are the "Schoenbein paper," which consists of filter paper on which is spread a thin paste composed of starch (50), potas. iodide (5), and water (1000). This paper when moistened in clear water and exposed to the air turns a blue color if ozone be present. A second and very delicate test paper is made from thallous hydrate. A less delicate test is that of filter-paper dipped in tincture of guaiacum. These test-papers,

with color scales, have been furnished to different observers at Boston, New York, Philadelphia, Baltimore, Pittsburg, New Orleans, Chicago, St. Paul, Lansing, Lawrence, Denver, and San Francisco.

Reports for but one month have as yet come in, and nothing of course can be said as to what the experiments will eventually show. In most of the stations there were no indications of the presence of ozone. In a few places, as in Michigan, the amount was so great that the test-papers were found too delicate.

The institution of these experiments marks the beginning of the closer study of atmospheric conditions in their relation to disease. There is much to learn here, and we trust there will result some definite contribution to our knowledge.

LEGISLATIVE PROTECTION AGAINST VENEREAL DISEASES.

The subject of the prevention of venereal disease by legislation was brought up at a meeting of the Medico-Legal Society, April 5th. Dr. Gihon, U.S.N., presented essentially the same paper which was read by him before the American Public Health Association a year and a half ago. The extent and evils of venereal disease were fervidly portrayed, and the great need of preventing their baneful effects was urged. The measure suggested to secure this end was the classing venereal affections with other contagious diseases, and the granting local or State health boards authority to treat them as they would, for example, small-pox. It would further be made a crime for one individual knowingly to communicate venereal disease to another. A draft of such a bill was submitted for criticism.

The discussion for the most part drifted off into purposeless talk concerning vaccinal syphilis. Enough was said, however, to show that the views of the reader of the paper were considered to be somewhat high-colored, and his proposed law hardly a practicable one.

Dr. Gihon has undertaken to champion a fight against venereal disease. His task is an unsavory one, and exposes him to much unintelligent if not unjust criticism. But the cause is good, and he can be fairly assailed only as regards the special methods he advocates for carrying out his views.

There are probably from one and one-half to two millions of syphilitics in the United States. This is a serious fact, yet not so frightful as is painted. If we may believe Dr. Taylor, ninety-nine out of a hundred adults will get well if properly treated. They are liable to communicate the disease in a dozen different ways. The other eleven were pictured most vividly, and not without much exaggeration, by the speaker of the evening. There is nothing to be gained by inflammatory descriptions of virulent napkins, bed-clothes, knives, car-cushions, etc., when appealing to a body of scientific men, though such arts may tickle the medico-legal imagination. The evil is propagated by sexual immorality, not by soiled linen, and against this the fight must be made.

While not directly advocating it, Dr. Gihon affirmed his belief in regulating prostitution, as is done abroad. In presenting his arguments he somewhat disingenuously failed to refer to the sanitary working of these regulations in European cities. As is known, they do not secure very good results there. To the plan suggested, of treating venereal diseases as we would small-pox or scarlet fever and compelling isolation, one objection arises which will be very hard to meet. To accommodate those isolated in hospitals, the hospital accommodation would have to be at least doubled, and the expense of building and running the institutions would be enormous. The impracticability of such a proposition was shown by Dr. Simon when it was proposed some years ago to extend the working of the Contagious Diseases Act to the civil population.

Whether a law making it criminal to communicate syphilis would be effective is a question for lawyers to decide. On the face of it, this, too, seems impracticable.

There has been a mistake in attempting to deal with this question from a sanitary standpoint alone. It has a moral and a political side also. Those who aim to make the matter purely a sanitary one, will fail to secure any relief from the disease, and will never receive much sympathy from the intelligent public.

KIDDER ON SCARLATINAL BLOOD.

In proportion as scientific research brings into light points hitherto obscure, showing how certain symptoms may be accounted for, and how diseased conditions may be treated, does it aid the practitioner in elevating the practice of medicine to a plane much higher than the one upon which it now rests. To this end, Dr. J. H. Kidder, U. S. Navy, has, with great care, examined microscopically the blood of scarlatina and typhoid fever, with the following results: Scarlatina blood, at the time of greatest intensity of the disease, contains very minute, spherical, highly refracting globules, of a vinous red color, attached to the leucocytes. Besides these globules, the leucocytes present well defined curved lines of double contour, upon which the globules are often so disposed as to suggest the idea that there is some close relation between them. The globules, as describeed, have not been observed by him in or upon the leucocytes of healthy blood, nor in those of malarial fevers, typhoid fever, or beri-beri. They may be the small corpuscles described by M. Schultze (Rollet, in Stricker's "Histology," vol. i., p. 379), or

the hæmatoblasts of Hayem (Satterthwaite's "Histology," New York, 1881, p. 47), or they may be characteristic of the blood of scarlatina, and probably other acute exanthemata. In the blood of typhoid fever were found ill-defined, opaque spherules, mostly within the substance of the leucocytes, and neither colored or highly refracting. These, however, are not regarded as distinctive marks of typhoid blood. The photographic illustrations which accompany Dr. Kidder's article are very clear in outline, and are so arranged as to show the comparative difference in the appearance of the various microscopic sections. This work is an indication of what the Government may accomplish through its official representatives in diffusing valuable accurate information, which not only serves as material for use in the field of practice, but removes obstacles to the progress of expansive study.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 8, 1882.

DR. EDWARD C. SEGUIN, PRESIDENT, IN THE CHAIR.

(Continued from page 384.)

DESQUAMATIVE PNEUMONIA—TUBERCULAR ENTERITIS.

DR. PUTNAM-JACOBI presented the lungs and intestine of a child fifteen months old, who had succumbed to tubercular enteritis and pneumonia. The history was very imperfect, containing little beyond a statement of long-standing diarrhœa. The principal interest of the autopsy centred in the right lung. Before opening the chest percussion showed absolute dulness over the whole anterior surface of the right lung. The upper lobe was found adherent to the pleura throughout the entire extent of its anterior surface, and principally so at the apex, where tearing of the adhesions revealed a group of minute caverns. The entire lobe was solidified. The interesting circumstance, however, was that this solidification differed entirely from that of a hepatised pneumonia. The lung tissue throughout the lobe looked completely anæmic, was smooth, yellowish white—a color about midway between the diffuse gray and the diffuse yellow tubercular infiltration of Laennec. Neither blood nor air could be squeezed out of the surface of a section.

Microscopic examination of the tissue showed lesions identical, on the one hand, with the "genuine desquamative pneumonia" of Buhl; on the other hand, with an aggregation of structures, each resembling the second species of miliary tubercle, as recently described by Delafield. In any given area could be observed—1st, large, irregular spaces, from which all trace of alveolar structure had disappeared, and which were occupied by two kinds of cells, (*a*) polygonal cells of various shapes and sizes, evidently altered epithelium, (*b*) small angular elements, sometimes non-nucleated, sometimes with a nucleus almost filling the cell; there were evidently two atrophic tubercle elements; 2d, adjoining the foregoing spaces were smaller ones, formed from the coalescence of two or more alveoli, and surrounded by a thickened alveolar wall; the contents of these spaces were identical with that of the others; 3d, alveolar spaces, normal in size, but more or less filled with the foregoing elements, and then always infiltrated with small cells; in some of these loops of capillaries persisted, in many were extravasated blood corpuscles; 4th, whenever a bronchial tube appeared in the section, its walls were observed to be infiltrated in the same manner. In the sections so far made no blood-vessels had been found. These lesions were entirely absent: 1st, the so-called tubercle nodules with a giant cell in their centre; this corresponds to Delafield's remark that in tubercle two distinct species of nodules exist, one of which has, the other has not, giant cells, and that the two species are not found together in the same lung; 2d, in the second place, in spite of the profound anæmia of the tissue, there were no masses of amorphous caseous detritus, such as so generally exists in tubercular pneumonia; 3d, and finally, there were hardly any leucocytes, and no aggregations of pus. The middle and inferior lobes of the right lung, and the lower lobe of the left, offered the usual appearances of broncho-pneumonia; the left upper lobe was healthy.

The mesentery was studded with nodules, consisting of enlarged glands. Those nearest the hilus of the mesentery were often as large as hickory nuts, were perfectly white, and section showed them to be nearly entirely composed of cheesy matter. Near the free border of the mesentery existed a number of small bodies, the size and shape of lentils, and dark violet in color. The small intestine contained a number of round ulcers.

The history of the case would seem to indicate that the disease began in a catarrhal enteritis, and that consecutively to this the mesenteric glands had first engorged, then undergone caseous degeneration. There was no evidence that the pneumonia, although tuberculous, was due to infection from these glands. There were no isolated miliary tubercles either in the lung tissue or in pleura, peritoneum, or arachnoid. Rather did this extensive lobar infiltration seem to result from the cachexia induced by the interruptions to intestinal digestion and absorption.

DR. SATTERTHWAITE, as bearing upon the question of the existence of a caseous centre from which general tuberculosis might have developed, asked whether the enlarged mesenteric glands were primary or secondary.

DR. JACOBI thought, from the history of illness beginning in a diarrhœa, that the primary affection was in the intestine, and that the pulmonary trouble did not correspond with general tuberculosis in its ordinary form.

DR. SATTERTHWAITE regarded the form of phthisis called diffused infiltration of tubercle (Laennec), caseous pneumonia (Niemeyer), and desquamative pneumonia, or tuberculous pneumonia (Buhl), as one and the same lesion, and secondary to cheesy foci. In the specimen presented he thought that there were miliary tubercles at the apex of the lung, and the pneumonic changes were probably secondary to the infiltration of the apex, and showed tuberculous caseous centres.

FIBROMA (?) OF THE ABDOMINAL WALL.

DR. C. K. BRIDDON presented a tumor, weighing two pounds and eight ounces, and removed from the abdominal wall of a woman, twenty-seven years of age, the mother of three children, the youngest

being born in December, 1881. In the second month of her last pregnancy she first noticed a tumor in the right iliac fossa about the size of a man's fist. She subsequently went into a large hospital, specially devoted to the treatment of diseases of women, where the tumor was regarded as ovarian. Early in February she came under Dr. Briddon's observation in the Presbyterian Hospital, when he found a tumor, measuring eight inches in its longest and four inches in its shortest diameter, situated in the right iliac fossa, parallel with, and about two inches above Poupart's ligament, dense, so mobile that it could be nearly surrounded with the hands, and at first he regarded it as a solid ovarian tumor. It was examined by several men eminent in the class of affections to which the tumor was supposed to belong, and by them regarded as ovarian in character. It was subsequently examined by a gentleman still more eminent, who thought that it was not ovarian, and probably not connected with the pelvic viscera.

Studying the tumor from time to time, Dr. Briddon finally reached the conclusion that it was not ovarian, and probably not of pelvic origin. As it increased in size it become more and more fixed, and it was decided that the proper mode of treatment was to remove it. Dr. Briddon then regarded it as a sarcoma developed in the connective tissue of the abdominal walls, and by others also it was thought to be a sarcoma.

On Saturday, March 4th, the tumor measured nine inches in its longest and five inches in its shortest diameter, and an operation was performed for its removal. The growth was readily exposed, and was found to be so closely incorporated with the lower portion of the internal oblique and transversalis muscles as to render the separation difficult. This was particularly noticeable where the fibres arise from the outer half of Poupart's ligament, and at their insertion into the crest of the pubes.

On removal of the mass it was found that the peritoneum had been exposed over an area of four inches square, was very considerably thickened, and covered with the dense transversalis fascia.

The tumor was probably developed from the transversalis fascia, and the microscopic examination was being made by Dr. Satterthwaite, who would report concering its character.

Dr. Satterthwaite said that he had not had an opportunity to examine sections to much extent, but so far it had presented the usual appearance of a fibroma, and Dr. W. H. Porter, who examined the tumor when it was fresh, and also had made microscopic sections, thought it was a simple fibroma. Further report would be made.

Dr. Beverly Robinson presented a specimen of

GASTRIC ULCER—EROSION OF THE PANCREATIC ARTERY.

It was removed from the body of a woman forty-six years of age, a widow, who had suffered from obscure gastric symptoms for a year or more, and died in Charity Hospital February 13, 1882. She was admitted February 7th.

There was no hereditary disease in her family, so far as she could remember, and she never knew of any member having had a hemorrhage. She was the mother of three children, living, youngest being seventeen years old. Widowed at thirty, climacteric at forty-two. Had always been accustomed to the use of porter, but never used other stimulants except tea, of which she had been an excessive drinker since childhood.

Immediately after the menses ceased, she began to experience vague pains in the back. They increased, became dull, boring, and continuous. After eating she had painful eructations, and frequently vomited; could not sleep on her back.

The lungs were normal; the heart was hypertrophied, mitral regurgitation. Four hours after admission had a profuse gastrorrhagia; unable to speak, still vomiting blood in fluid form; surface cold; pulse imperceptible; pupils dilated; respirations sighing; sphincters intact.

Hemorrhage checked by ergot, fl. ext. hypodermically. Ice per orem, ice-bag to the epigastrium. She lost about sixteen ounces of blood on February 8th. From this she somewhat rallied. Could retain only milk, whipped eggs, and soaked bread. Remained without notable change until February 13th, when the hemorrhage recurred, eight ounces, and she died in collapse.

Autopsy, fifty-two hours after death, by Dr. Maxwell. Body emaciated, skin pale, rigor mortis present.

Head.—Not examined.

Thorax.—Bands of adhesion on the left side.

Lungs.—Emphysematous; moderate œdema and hypostatic congestion of dependent portions.

Heart.—Marked hypertrophy of left ventricle; cavities nearly empty; walls firm; color normal.

Valves.—Tricuspid orifice larger than normal; thickened and roughened calcareous nodules on one of the anterior leaflets; on post-segment of valve several roughened spots, three small deposits of fibrine. *Mitral orifice* also larger than normal, with moderate thickening of free margin at certain points and some thickening of chordæ tendineæ. Aortic valves and aorta normal, except blood-staining of the intima; the endocardium is similarly blood-stained.

Abdomen.—The omentum firmly attached to pelvic organs by old adhesions. The *stomach* attached to anterior border of pancreas, about three inches from its tail. This adhesion gives the greater curvature a scalloped outline.

Stomach contains six ounces of blood coagula. On its posterior wall, about three inches from cardiac orifice, a large chronic ulcer, oval in outline, three-fourths of an inch broad, one and one-fourth of an inch long; its long diameter corresponds with the transverse diameter of the stomach. The edges of the ulcer are smooth, sloping evenly down to the base, with only moderate hardness to be felt. From about the centre of the base a projecting (one-fourth of an inch) thrombus with a narrow opening in its centre. Inserting a small broom-stem into this channel, and slitting up with scissors, proved this channelled thrombus to partially occlude an erosion of the main trunk of the pancreatic artery. The latter was proved by tracing it up. The erosion had been probably about one-sixth by one-eighth inch in diameter. The pancreatic artery was empty. Two cicatrices existed in the anterior wall of stomach, directly opposite to ulcer described. The mucous membrane of stomach was softened (post-mortem) and blood-stained.

Intestines.—Abnormal amount of blood-stains noticed in duodenum but extends no farther; otherwise normal.

Liver.—Diminished in size; thickened capsule; granular surface; cirrhotic; anæmic.

Spleen.—Small; firm; pale.

Kidneys.—Diminished in size, thickened, and adherent capsules; surface pale, granular, dotted with cysts of varying size, and on section shows a general

atrophy of both portions. Most marked of the cortex (anæmic). Chronic diffuse nephritis.

Uterus and Appendages.—Evidences of old perimetritis; the uterus and ovaries are atrophied.

Dr. Satterthwaite had made a post-mortem in a case of gastric ulcer, where there were no symptoms until just before death. About two days before death the patient, a girl, complained of abdominal pain, which the autopsy showed to be due to perforating peritonitis, the perforation in the stomach being sufficiently large to admit the little finger, and situated in the middle portion of the anterior wall. There had been adhesions between the stomach and omentum. There was no organic cardiac or vascular disease to account for the ulcer on the theory of embolism.

Dr. Putnam-Jacobi asked, if in cases of repeated hematemesis, marked pulsation of the abdominal aorta had been noticed. A case had been under her observation in which vomiting of blood occurred at different times, and after an interval of ten years a violent attack developed, and the only local symptom was marked pulsation of the abdominal aorta, which ceased after the vomiting of blood stopped. The patient was a woman, and recovered.

Dr. Robinson thought that the symptom had no special significance in connection with vomiting of blood.

morbus maculosus werthofii—acute purpura hemorrhagica.

Dr. W. Gill Wylie presented specimens illustrating the above affection, and with the following history: Mr. C., aged 35; born in New York. He had known the patient for the past five years, and had treated him at different times for debility, and depression of spirits, and rheumatic diathesis. For several years past he was subject to a dry, scaly eruption, showing itself mainly over the lower extremities. He was always more or less depressed, and rarely felt entirely well, but, except the eruption, had no definite disease. For several years as a young man he had used stimulants freely, and, except, perhaps, during the past few months, rarely drank stimulants of any kind. About six months ago he was advised to change his occupation, that of bookkeeper. After this he acted as purser on a steamer that made regular trips to different parts in Central America. The change seemed to be of benefit to him, and he gained in strength and flesh. Two weeks before his death he returned from a voyage of several weeks, and "on landing felt heavy and bilious," as he expressed it, and took a purgative; after this he felt very well until three days before he died. Dr. Wylie saw the patient on Wednesday evening, February 22d, when he complained of being drowsy, and somewhat nauseated. His pulse was good, and temperature in axilla 98½° F., and nothing unusual about him was noticed. Ordered one-half grain podophyllin at bedtime, and mineral water to be taken next morning. The next morning (Thursday) Dr. Wylie was sent for, and on arrival found the patient vomiting a slight amount of frothy fluid. Pulse under 90 and temperature normal. Ordered small doses of ipecac. In the afternoon the vomiting had increased, and when he visited the patient he found him writhing in pain, which was located as being worse over the lower part of the right lobe of liver, and extending across the abdomen. His face was flushed, but temperature was 98½° F., and pulse 90. One-fourth of a grain of morphine was given hypodermically. The next day (Friday) Dr. Wylie saw him at 11 A.M., when he found that the morphine acted like a charm, and kept the patient from vomiting until 8 P.M., when the same symptoms returned. His pulse was 90, and temperature 98¼° F. Abdomen somewhat sunken, tense, and as hard as a board. Face very much flushed, and of a deep yellowish or orange tint. Eyes were suffused, and lids puffed. No ecchymotic spots were noticed. The pain was described as pulsating and stinging with each heart-beat, and caused an oppressed feeling about the diaphragm. Heart-sounds were somewhat feeble but seemed otherwise normal. It was supposed that the patient might be passing a gall-stone, and he gave one-third grain of morphine hypodermically.

At 11 P.M. of the same day he saw the patient again, and was surprised at the change in his appearance since morning. From the lower part of abdomen to the roots of his hair he was deeply flushed and looked as though his skin was stained a deep orange color. His eyes were literally black and blue, the conjunctiva was suffused with blood, and protruded between the lids at the corners; his neck and body down to the waist was dotted with hundreds of dark bluish hemorrhagic spots, from size of a pin-head to a bean. The abdomen was very tense and somewhat sunken. Pain and occasional vomiting were the same as in the morning. Pulse, 95; temperature, 98⅘°; and mind perfectly clear. He had retained very little food. Dr. Wylie considered his condition dangerous, but gave him ¼ gr. morphine hypodermically, and arranged for a consultation early the next morning. The patient's mother remained with him for more than an hour, and at 3.30 A.M. came to his room to see him. At this time he was easy, and he persuaded her to go to her room and leave him for the night. At 6.15 A.M., when she again returned to his room, he was dead. Dr. Wylie saw the body at 7 A.M., the extremities were cold, body warm, but he could elicit no signs of life. Dr. Loomis saw the body soon afterward and recognized the case as one of purpura.

10 A.M., same day (Saturday), assisted by Dr. J. S. Howe, an autopsy was made. The front of the body, above the middle of the thighs, was covered with hemorrhagic spots, varying in size from a mere dot to size of a bean. The face and legs below the knees were free from these hemorrhages. Eyelids bluish-black, conjunctiva swollen and protruding, cornea bloody, and pupils moderately dilated. Gums covered with dried blood, bloody discharge in ears. Back of neck and body deeply discolored. Prepuce long, and when forced back showed evidence of phimosis of long standing. Abdomen sunken and more thickly studded with hemorrhagic spots than any other part of surface. Neck, inside of arms and thighs pretty well covered also. An incision was made from upper end of sternum to pubis in the median line. Hemorrhages were found in the muscles, in the connective tissue, and in serous coats. These hemorrhages were both large and small, some as large as a finger-nail and much longer. Those in the firm tissues were flat, those in looser tissues were round and irregular shaped.

There were hemorrhages into the omentum and in different parts of the peritoneum, especially the upper part covering diaphragm.

Intestines were firmly adherent to a large and tensely distended gall-bladder, and the tissues adjacent to the duct were matted together with old adhesions.

Liver and spleen apparently healthy and free from hemorrhages.

Kidneys about normal size, with some hemorrhages in the membranes of the outer coat.

The sternum was removed and hemorrhages were found in the pleura. None were noticed in the lungs.

The pericardium was dotted with hemorrhagic spots, both inside and outside. About three ounces fluid were found in the pericardium, supposed to be post-mortem. The heart, or rather the serous lining, was dotted with numerous little hemorrhages.

The blood was dark, and everywhere fluid and thin; no clots, except in the meshes of the tissues were found. Brain not examined.

Dr. Satterthwaite referred to a case in which he was present at the autopsy, and presented the specimens to the society in behalf of a candidate. The patient was a remarkably robust woman, who had had common intermittent fever, and had recovered entirely. She had had two attacks of urticaria, a disease which has been spoken of as occurring in connection with morbus maculosus, and they occurred without any assignable cause. The occurrence of the hemorrhage was preceded by a chill. The first hemorrhages were two ecchymoses upon the wrist, and some spots in the mouth, noticed in the morning, and in the afternoon of the same day there was a large hemorrhagic exudation beneath the mucous membrane under the tongue, and some spots upon both sides of the fauces. He did not succeed in arresting the hemorrhages. The patient was transferred to the St. Luke's Hospital, where she came under the care of Dr. Robinson.

Dr. Robinson said that he succeeded in arresting the hemorrhage by the use of ergotine hypodermically, and moderate general faradization. The effect of these remedies was so marked that he thought if they could have been employed earlier possible permanent benefit might have followed.

In answer to a question, Dr. Wylie ascribed the cause of death to hemorrhages into the brain, probably occurring when the vomiting came on the morning the patient died.

Dr. Putnam-Jacobi observed that these cases of purpura seemed to depend on a fermentative metabolism of nitrogenous substances, probably initiated in the liver, and which brought them into relation with three great morbid processes: rheumatism, known in certain cases to present a very mild form of purpura among its symptoms, the peliosis rheumatica; lithæmia, which essentially consisted in morbid metabolism of nitrogenous substances; finally, pyæmia, whose symptoms could be induced by injection into the blood of the fibrine ferment derived from serum globulin, a natural albuminoid. The cases of spontaneous pyæmia that had been recently observed in the course of rheumatism, showed what profound changes can be induced in the blood by certain modifications of the fibrine-forming process which certainly goes on in rheumatism. It is conceivable that in the peliosis rheumatica the hemorrhages should really be due to capillary emboli, caused by this excess of fibrine. But in the fatal cases of purpura recorded by Drs. Wylie and Robinson, death certainly could not be explained by such emboli, nor even by loss of blood. It seemed much more probable that a profound alteration of the blood existed, which first impaired the nutrition of the capillary walls, permitting their rupture, then became unfit to sustain any vital organs. It would be extremely interesting to know whether the alkalinity of the blood became diminished during life in these cases.

Dr. Peabody suggested that purpura rheumatica, which was rarely accompanied with hemorrhages from mucous membranes, and from which patients generally recovered, should be separated from purpura hæmorrhagica, a much more serious and fatal disease.

Dr. Satterthwaite said that in the case which came under his, and also Dr. Robinson's observation, there was no rheumatism whatever. He thought it very important to separate purpura rheumatica from purpura hæmorrhagica.

BOVINE TUBERCULOSIS.

Dr. Satterthwaite presented two sets of specimens of bovine tuberculosis from cows, one representing the early, the other the advanced stages of the disease. In the first set of specimens, it was observed that one or more cretaceous deposits were present in each lobule, while the adjacent tissue appeared to be unaffected. In the second series, the lobules were each completely filled with chalky masses, exhibiting a concentric arrangement, and in many instances distending the lobule to the utmost. This was a striking example of the "pearl disease" (perlsucht—pom melière), that occurred so frequently in the bovine race when in confinement, and which had been said by Charles Creighton, of Cambridge, to occur in the human being. In the second case the pleuræ were covered with "grapes" or "angle-berries," pendulous tumors of varying size connected with the serous membrane, some no bigger than a pea, while one that was sessile, measured several inches in diameter. Each of them was cretaceous in the centre and there seemed to be a general agreement among histologists that their histological structure was identical with that found in the human gray and yellow tubercles. As to the bruited question, whether the milk of tuberculous cows, or the meat of any of the animal products could convey the disease to human beings, it might be said that the matter was still *sub judice*, even Virchow, after four years of labor, declaring that the transmission of the bovine disease could not as yet be proved.

That Dean Swift suffered from Ménière's disease, or labyrinthine vertigo, is shown as clearly as can be by Dr. Bucknill in a recent number of *Brain*. At the age of seventy-four, and not before, he became insane and hemiplegic with aphasia. The form of insanity was dementia arising from general decay of the brain.

Dr. Bucknill gives some light to the critics who have been accustomed to blame severely Swift's treatment of Esther Johnstone. He says: "One final consideration is that the oppressive and disabling nature of Swift's lifelong disease has been greatly underrated in the more severe of the criticisms which have been made with regard to his conduct to Esther Johnstone. I do not know that labyrinthine vertigo would necessarily incapacitate a man for the performance of marital duties, but it certainly might be a barrier to them more formidable than unprofessional critics are likely to suppose possible. Dr. Beddoes suggested that Swift was impotent from youthful dissipation, of which there is not a tittle of evidence. May not the great and grave disease of which I have adduced such copious evidence have been the real reason why Swift did not live with the woman whom it is certain that he loved with the most tender and persistent devotion?"

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 6, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. J. W. THOMPSON, of Paducah, Ky., and Dr. Staton, of North Carolina, were introduced to the Academy, and invited to seats upon the platform.

The Corresponding Secretary announced the death of Dr. Edward M. Beadle, one of the original founders of the Academy, and Dr. Gouverneur M. Smith offered a preamble and resolutions, which were unanimously adopted.

The President appointed Dr. John G. Adams to prepare a memoir, to be read at some future meeting of the Academy.

The special order for the evening being the Report of the Delegates to the Medical Society of the State,

DR AUSTIN FLINT moved that the report be accepted, and that the further consideration of the topics contained therein be indefinitely postponed. Unanimously carried.

The paper for the evening was then read by DR. FESSENDEN N. OTIS, and entitled,

"CASE OF PERSISTENTLY RECURRING SPASM OF THE BLADDER RESULTING IN THICKENING OF ITS WALLS, DILATION OF THE URETERS, AND HYDRONEPHROSIS—DEATH FROM URÆMIA—PATHOLOGICAL SPECIMEN."

Preliminary to the case indicated in the title of the paper, Dr. Otis referred to two others in which there were symptoms almost identical with those which had been observed in connection with genito-urinary disturbances due to reflex causes. The first was that of an encysted vesical calculus. The stone was removed by the median operation of lithotomy. Much difficulty was encountered in finding the calculus after the bladder had been opened. To facilitate exploration in similar cases, Dr. Otis suggested the use of a moderately flexible wire, doubled so as to make a loop, perhaps three-fourths of an inch long, to project from the end of the index finger, around which the wire was twisted, passing upward and secured about the wrist. No accident or complication attended or followed the operation, and the patient, a miner, was discharged, cured, on the morning of the tenth day.

The second case, illustrating spasm of the orifice of the bladder from reflex irritation, was published in the *Hospital Gazette* for June 22, 1879. The case which formed the basis of the paper was then reported. [See Report Path. Soc., MEDICAL RECORD, April 8, 1882.]

The interest in the case centred in the persistent closing of the orifice of the bladder, the result, as Dr. Otis believed, of irritation at some point, and reflected through the urethra, in this instance the irritation being due to a narrowed canal of the meatus, the contraction for the distance of half an inch being to No. 25 and 26. He believed that the difficulty was reflex in origin, dependent chiefly, if not wholly, upon a contracted meatus urinarius, and that if this condition had been appreciated fully early in life, much, if not all, of the agonizing suffering which the patient endured might have been avoided. Special reference was made to the views of Civiale and Sir Henry Thompson upon this subject, who believed that obstruction at the orifice of the meatus might give rise to extremely obscure urinary troubles, and also to his own nineteen cases, reported in a paper read before the New York Academy of Medicine.

The paper being before the Academy, DR. A. C. POST said he had been well satisfied that in a number of cases of urethral or vesical irritation, the contracted state of the meatus urinarius had been an important element in maintaining the irritation which had existed. He thought it was often the case in senile enlargement of the prostate. There were many cases in which great difficulty was encountered in the introduction of instruments for the purpose of evacuating the bladder, and he had known some instances of that kind in which difficulty of catheterism was obviated by dividing the meatus. A man sixty years of age had suffered for some time with urinary difficulty with enlarged prostate, and it had been necessary to evacuate the bladder with a catheter. Only an instrument of very moderate size could be introduced. Dr. Post enlarged the meatus, introduced a large catheter, and it passed into the bladder readily, and gave the patient complete relief. He then dilated the orifice by means of large steel sounds, and in the course of a few days the patient dispensed with the use of the catheter, and it had not since been necessary to return to the instrument.

A case of close stricture of the urethra was mentioned, in which he obtained a very satisfactory result in a similar manner.

DR. E. L. KEYES differed with Dr. Otis concerning the etiology in the case which formed the basis of his paper, and for the following reasons: In the first place, it seemed to him that relief of reflex spasm of the urethra, obtained by introducing instruments, was mainly due (1) to the direct influence upon the sensibility of the deep urethra, and (2) in a mechanical way upon the contracted muscle, and besides the size of the instrument was particularly important.

Many cases certainly did have persistent symptoms of stricture which proved to be simply cases of spasm of the urethra. A case in point was mentioned.

Many cases did undoubtedly get well of spasm of the urethra by the passage of large sounds, whether they had small meatus or not, if not too small, and without cutting the urethra.

Many cases which did not get well by the passage of sounds might, and probably did, recover after these points of narrowing had been erased. But it seemed to him that recovery in cases in which these narrowed points had been incised was on account of the fact that a large instrument could be brought to bear upon the deep urethra.

It would be interesting to know whether any cases of spasm of the deep urethra had been cured by incising the meatus, and not passing sounds afterward.

DR. OTIS said that he had done it in a number of cases, and the result had been satisfactory.

DR. KEYES further remarked that many cases, in which relief had not been afforded by the passage of reasonably large sounds, had not been cured by incisions in the urethra, while there was no other evidence of disease in the urinary passages, and the vesical mucous membrane was undoubtedly not inflamed. A case was mentioned in which a patient, apparently in the best of health, suffered from attacks of retention of urine lasting for hours. He

was subjected to a great variety of treatment without relief, and finally, about a year ago, his urethra was treated upon the principle of relieving anterior constrictions, and passing large sounds. In that manner his urethra was brought fully up to its natural calibre, but not a particle of benefit followed. At present his urethra would take No. 35 or 36 readily, and the instrument enter the bladder without difficulty. Notwithstanding this fact the patient had in this condition been subject to attacks of persistent spasm of the urethra for several years, the mucous membrane of the bladder was without doubt physically sound, and there was no pus in the urine.

With reference to the case reported by Dr. Otis, Dr. Keyes offered the following explanation of the persistently recurring spasm, namely, a gentleman reaches a certain period in life, and then acquires a gonorrhœa, which is the beginning of his trouble. Before that time, despite a small meatus of his urethra, he has had no symptoms whatever. His trouble begins after an attack of urethritis. This is not uncommon. Then the patient has calculous attacks which aid in causing spasm about the bladder, so commonly seen in connection with irritation in the kidney. It is probable that during all this time the patient's urine contains pus; at least such had been the fact in the cases he had seen.

Dr. Otis said that pus was present in the urine most of the time in the case reported.

Dr. Keyes: Finally an incision of the meatus was made and temporarily the spasm yielded, but reaction developed, due to the irritation from the calculus found in the bladder, or to the passage of instruments, or other causes, and the uræmia manifested itself which killed the patient. He thought it was a case that originated in gonorrhœal cystitis, going on to pyelitis upon both sides.

Dr. J. W. S. Gouley thought that one of the corresponding fellows of the Academy had, many years ago, graphically described the class of cases to which the one reported by Dr. Otis belonged. Mercier, the corresponding fellow alluded to, says that these troubles originate in a persistent chronic cervical cystitis following a urethritis, a cervical cystitis which gives rise to intense congestion of the capillaries and small vessels underlying the mucous membrane, thus causing what he calls contracture of the urethro-vesical orifice. He speaks of spasmodic contracture and permanent contracture. Spasmodic contracture follows chronic urethritis, and is curable. The permanent contracture, if left to itself, is incurable. He calls the permanent contracture a muscular valvule, the valvule causing impediment to urination, hypertrophy of the median portion of the prostate, residual urine, constant contraction of the bladder to expel it, hypertrophy of the vesical walls, cystitis from decomposition of the residual urine, inflammation of the ureters, pyelitis, pyelo-nephrosis, acute interstitial nephritis, superimposed upon a subacute or chronic condition, and death.

A patient may have permanent contracture for a great many years without suffering more than the inconvenience caused by stagnant urine. Of course, stagnant urine, acting like a foreign body in the bladder, will give rise to spasmodic contractions; but, that the bladder may contract without irritation from within or obstacle at the urethro-vesical orifice, Dr. Gouley could not conceive. He could not conceive that spasm of the urethra would cause chronic, habitual retention of urine. In nearly all such cases as that described by Dr. Otis, the obstacle is at the urethro-vesical orifice, and a very interesting point is that at post-mortem examination it is not easy to discover a urethro-vesical valvule. To do so, the bladder must be examined with the greatest care, and from above. It should not be slit open along its anterior border, and the prostatic portion of the urethra cut, but the urethro-vesical orifice should be examined from within. Mercier says that diagnosis of muscular valvule can be made with certain instruments, particularly the rectangular sound, and Dr. Gouley has made some improvements upon this sound by which diagnosis of both the muscular and the prostatic valvule can be positively made. For one, he was thoroughly convinced of the truth of Mercier's statements, as he had had a number of cases which he had been studying for several years, and they fully sustained the views of that author, who had written nearly a volume on the subject.

Dr. Gouley then referred to a case of incarcerated vesical calculus under his care.

Dr. F. H. Hamilton agreed with Dr. Otis in the view that examples of occlusion of the meatus urinarius must be a frequent source of irritation at the neck of the bladder, perhaps chronic cystitis and pyelitis, but the exceptions were very frequent. His experience did not imply that it was so constant as the teachings of Dr. Otis would seem to indicate.

Dr. Otis, in closing the discussion, said he was not at all certain that the relief in a considerable proportion of cases was not due, as suggested by Dr. Keyes, to the passage of an instrument through the deep urethra into the bladder. He had been of the opinion that in many of these cases, this was essential in order to afford relief. But he was more confident that the independent influence of the meatus was sufficient to produce marked trouble at the neck of the bladder. He was not at all disposed to dispute as to the *modus operandi* by which the relief was afforded in these cases; but, in those grave cases not infrequently seen, he thought it worth while to try the method of making the meatus correspond to the normal calibre of the urethra, and passing a full-sized sound into the bladder. He was satisfied that a considerable number of cases would be cured in this manner, and if that was true we could afford to wait for the exact explanation, which, perhaps, might never be obtained. Dr. Hamilton had justly said that many patients with contracted meatus have no trouble, as much the largest portion of the human race have contracted orifices in proportion to the size of the urethral canal. But there were cases in which such trouble existed; and, as a rule, there was a history of sexual excess, and the entire apparatus was in a state of sensitiveness peculiarly adapted to taking on reflex disturbances. He had noticed, particularly, that the patients who suffer in this way have had gonorrhœa, many of them have a large amount of cicatricial deposit in the anterior part of the urethra, and it had occurred to him that possibly the terminal extremities of the nerves were involved in the induration, and that irritation was produced in that way. However it might be explained, as a matter of fact division of the orifice of the meatus, in a large number of cases, relieves irritation along the line of the genital apparatus, extending even to the spinal cord and brain.

The Academy then adjourned.

OBSTETRIC SECTION.

Stated Meeting, March 28, 1882.

HENRY E. CRAMPTON, M.D., IN THE CHAIR.

PELVIC HEMATOCELE.

DR. H. GRISWOLD reported two cases as follows:

CASE I.—Mary M——, twenty-three years of age; of a large, full habit; nervous temperament; Irish parents; had been married five years; had had two abortions, one at three months, the other at five months, induced, as she thinks, by her avocation—that of laundress—but was finally delivered at full term of a living child, leaving her with a lacerated cervix and partial laceration of the perineum—the latter not extending through the perineal body.

Three months after labor she called at his office and gave the following history: The lochia had never ceased. The evening before, while standing at the table, she felt very dizzy with sharp pain in the left side, and a feeling as if her insides were dropping out. This was accompanied by cramps in the stomach, and nausea, a frequent and painful micturition, constipation, and a bloody leucorrhœa.

Examination showed the vagina almost occluded by a soft tumor dissecting up the wall between the uterus and rectum. The uterus had been pushed up out of reach, and all the parts were very sensitive. She was confined to bed, and the symptoms were treated with anodynes, diuretics, mild cathartics, and the hot douche. In two weeks the effusion had disappeared, leaving no hardness save thickening and shortening of the left broad ligament.

CASE II.—Mary W——, thirty-eight years of age; Irish descent; small, nervous, and the mother of two children. The labors were natural, but says she has never been well since the birth of the youngest child. Four years afterward she presented herself for treatment for endocervicitis and metritis, but becoming impatient at the slow progress toward recovery, she abandoned all treatment and devoted herself to the usual labor of housekeeping for a growing family. Two years after this, and six years after her last conception, she had an abortion at the eighth week, preceded and accompanied by a cellulitis. The decidua was expelled on the fourteenth day. The uterus was surrounded by a good deal of induration, and there was considerable constitutional disturbance.

The case then passed into the hands of another physician, and Dr. Griswold learned that suppuration followed, ending in a discharge of pus by the anus. The remaining induration was treated by local galvanization—one pole in the vagina and the other over the abdomen—which completely restored, as he had been told, the mobility of the uterus.

Five years afterward, and eleven years after the birth of the youngest living child, she came to Dr. Griswold's office complaining of severe pelvic and abdominal pains, frequent and painful desire to urinate, not passing more than a teaspoonful, with increased pain after the effort, and obstinate constipation. Digital examination showed a large, moderately soft exudation filling Douglas' cul-de-sac. The uterus was pressed forward and upward so as to be distinctly felt above the pubis, the exudation also being felt behind it through the abdominal wall. The bladder was practically obliterated—a teaspoonful of urine occasioning intense pain. The attack had commenced the day before and was increasing in severity. She was confined to bed. Opiates, diaphoretics, warm fomentations, and mild cathartics were employed. The symptoms were but partially alleviated, and Dr. Neeggerath was called in consultation. Hæmatocele was diagnosticated and an operation proposed and decided upon. The patient being etherized, an aspirating needle was introduced, confirming diagnosis. An opening was made with a grooved gorget, along which a double hook was passed into the opening, which was then enlarged with the fingers and the clots evacuated. The sac was thoroughly washed with a solution (five per cent.) of carbolic acid. This was repeated every three hours during the day, followed by an injection of tincture of iodine for three days, when a ten per cent. solution of chlorine water was substituted for the carbolic acid. The sac rapidly contracted, the constitutional symptoms subsided, and at the end of three weeks the wound had entirely closed. Care had been taken that a premature closing of the wound should be avoided, by a frequent introduction of the finger.

Recovery seemed almost complete. Mobility of the uterus was restored, but a leucorrhœa remained, and the menstruation anticipated its return by from five to eight days.

She remained sterile, although there was no evidence but that the sexual act was satisfactory to both parties.

Remarks.—We all are aware that hæmatocele is but a symptom, like ascites, but, like dropsy, by its mechanical disturbance sometimes requires special treatment. In the first case the onset was marked with distinctness by constitutional symptoms of loss of a quantity of blood—dizziness, nausea, etc. The sharp pain in left side probably indicated the course of the bleeding from the uterus through the Fallopian tube.

The rapid and entire absorption of the effused blood promoted by rest and the other means used encourages us to expect that much can be done by such treatment.

In the second case we are taught not to hesitate to resort to an operation for relief, for notwithstanding the long and grave history of previous peri-uterine inflammation and the extensive wound necessary to relieve the fluid, the patient made a rapid and satisfactory recovery.

The practical points seem to be to try for a reasonable time the usual means to promote absorption, but at the first sign of constitutional infection, as shown by rise in temperature, frequent chills, sweating, etc., evacuate the sac thoroughly and establish complete drainage.

As it is difficult to ligate bleeding vessels in this situation the knife should be avoided and the opening made with blunt dilating, tearing instruments, or the paquelin thermo-cautery.

DR. SELL had seen several cases of pelvic hæmatocele and had treated them by rest and the use of internal remedies in preference to operative interference. Of course he would operate rather than allow septicæmia to develop and progress with its dangerous consequences.

DR. E. C. HARWOOD added one case which occurred in a patient, twenty-four years of age, who had been married only a short time. He attributed the hæmatocele to exertion in lifting. It filled Douglas' cul-de-sac, crowded the uterus up out of the pelvis, and interferred with the bladder. The patient had frequently recurring chills. The mass was aspirated through the vagina, and about one pint of offensive material removed. Recovery was complete, and the

woman had since borne two children, and the labors were normal.

Dr. A. S. Hunter remarked that he had not experienced any difficulty in making a diagnosis in cases of pelvic hæmatocele. The sudden development of intense pelvic pain, with fainting or collapse, were usually sufficient to give the clue to the real nature of the difficulty.

In one case that came under his observation, intense pelvic pain followed coition immediately, and upon examination he found a soft mass occupying the whole of Douglas' cul-de-sac. The acute symptoms were very intense. The case was treated by the use of opiates, hot water vaginal injections, and iodide of potassium, and at the end of ten days the effusion had entirely disappeared, so that defecation and sexual congress could be accomplished without inconvenience.

In another case the pelvis was apparently filled, and after passing the acute stage, in which the pain was intense, the patient was bed-ridden for two months, when the tumor emptied into the rectum and a good recovery followed. The woman afterward bore children without difficulty. He believed that this patient would have been benefited by early evacuation of the sac.

Dr. Post remarked that it would be interesting to know whether or not, in such cases, there was any material which could be injected into the sac and serve the double purpose of liquefying the coagulation and guarding against putrefaction. Again, it would be interesting to know whether or not there would be any danger in treating the cavity after Mr. Callender's method of disinfecting abscesses.

Dr. Harwood said that he used aspirator needles attached to an ordinary stomach-pump, and after the fluid had been evacuated the sac was refilled with an antiseptic solution. The fluid removed was thick and tarry.

EXTENSION OF THE HEAD PREVENTED BY SHORTENED UMBILICAL CORD.

Dr. F. V. White narrated a case in which labor was considerably retarded from the fact that the head did not extend, but after a time it was determined that extension was prevented by the shortening of the cord from being wound around the neck of the child twice.

A SIMPLE METHOD OF RESUSCITATING A STILL-BORN CHILD.

In this case the child was with some difficulty resuscitated. Dr. John Shrady was in consultation in the case, and he resorted to the following method with satisfactory results. Place a piece of thin cloth, like a handkerchief, over the mouth of the child, fill the lungs with fresh air, and then gently blow through the cloth, while the nose is held to prevent escape of air, and the stomach is gently pushed in to prevent the air from entering that organ.

A method which Dr. White had very frequently resorted to, with excellent results, was rubbing a small quantity of chloroform along the spine.

Dr. Post referred to the tendency to the occurrence of convulsions within twenty-four or thirty-six hours in resuscitated children.

Dr. Sell referred to a case in which he succeeded in restoring the child after working an hour and a half, but it died twenty-three hours afterward with convulsions. It was a case of breech presentation.

Dr. Harwood had found Kidder's "Galvano-Electrical Machine" most serviceable in resuscitating still-born children, applying the current through his own hands placed over the thorax and spine.

Dr. Hunter was unable to understand how a short cord could prevent descent of the child and extension of the head.

Dr. Post remarked that if the placenta was firmly attached, and the cord was placed sufficiently upon the stretch, either the uterus would invert, or the cord rupture, or the labor be obstructed.

Dr. Griswold referred to a case in which an exceedingly short cord gave way with an audible noise while the head was being delivered with forceps, and at once the delivery was completed with the greatest ease.

Dr. Hunter thought that the cord was not sufficiently firm to offer such resistance as would interfere with the natural forces of the uterus.

Dr. J. Lewis Smith remarked that cases had been reported, and he had also met with such, in which labor had been retarded by a short cord.

FISTULA IN ANO IN A CHILD THREE YEARS OLD.

Dr. A. C. Post referred to a case in which there was a fistula in ano in a child three years of age.

Dr. White had seen one in a child seven years of age.

The Section then adjourned.

Correspondence.

A QUESTION OF ETHICS IN NORTH CHINA.

To the Editor of The Medical Record.

Dear Sir: Practitioners of medicine in this country, separated as they necessarily are from the advisory and controlling influence of medical societies, are, to a very great extent, a law unto themselves, and as, in a majority of cases, the fields of practice are several hundreds of miles apart, and unopposed, the questions affecting professional ethics are neither frequent or difficult to deal with, as a rule. Nevertheless, questions of a serious nature do occasionally arise, and as for the most part, they are without precedent, it is wise, I think, whenever they are calculated to become causes of constant dissension, to submit them to authoritative and disinterested arbitration. I have therefore to beg you will, either through the columns of the Record or by post, give your opinion on the following case, which occurred in my practice during the past summer.

I was called to attend a lady medical missionary connected with one of the interior stations of a large and flourishing American society, who had come to the port for rest and treatment I paid her almost daily visits for a month, journeying some four miles on each visit, thereby consuming time which, during the pressure of summer work, had a very distinct value. At the expiration of that period, she wrote to say that as she was then convalescent, she no longer required my services, and would be glad to receive my bill. I then called on her to say that as against herself I had no account, but if it were a mission affair I would do as she had requested. She assured me she had no reason to regard herself as on a different footing from other members of the society for whose medical bills annual provision is made by the "Home Board," whereupon I rendered a bill for thirty-three per cent. of my usual charges, out of consideration for the society and its work. I heard nothing more of the matter for a fortnight, when I received a

grossly insulting letter from the Mission treasurer, demanding how I presumed to present a bill "for attending a regular graduate of a respectable college," and thus "availing myself of her sex to insult her." Finally, he concluded by threatening to "expose" me if I would not consent to withdraw my claim, and also that he should feel obliged to use his best efforts to injure my social and professional standing. I replied in brief that as my bill was a society obligation, and in no way affected the pecuniary interests of my late patient, I failed to see by what right he demanded "the courtesy of the profession," or why the society he represented should consider itself entitled to dictate my free list. There the matter rests, and for my month's attendance I have not received even a note of thanks. And now may I ask if you regard governments, corporations, and societies as having a right to expect gratuitous attendance on their medical officers under the plea of professional etiquette? If so, do you not consider general practitioners are entitled to expect these salaried officers to abstain from private practice?

I ask for the reason that it is a too frequent cause of complaint in the East that medical missionaries and naval surgeons encroach on the domain of the local medical men wherever they may be stationed for the time being; and until good taste or authority puts a stop to the practice, I, for one, shun no "exposure" of my strong objections to admit such governments and societies to the courtesies of the profession, unless it can be proved that by so doing I confer a monetary favor on my professional colleague.

Enclosing my card, I remain,

Yours faithfully,

P. A. R.

North China, December 8, 1881.

[The case in question should be settled in accordance with the code of ethics in force in the writer's neighborhood. Judged by the New York standard, our correspondent is entitled to payment for his services, as "gratuitous attendance cannot, however, be expected from physicians called from a distance" (N. Y. Code of Ethics, lines 77 and 78).—Ed.]

INEFFECTIVE VACCINE VIRUS.

To the Editor of The Medical Record.

Dear Sir: Dr. J. B. Taylor, in his remarks on my article on "Ineffective Vaccine Virus," published in your last issue, commits an error which I hope you will allow me to correct. He says that the writer "states that his usual success is about twelve and one-half per cent. in primary subjects." Nothing of the kind is found in the article in question. All I say about my personal experience with the virus bought in different places in this city is that it is more an exception than a rule that the first vaccination takes, and that within a year I have had three (primary) cases in which I vaccinated three times in vain before finally a fourth attempt was successful.

I shall try the scarification recommended by Dr. Taylor, although it is difficult to see why it should work better than the abrasion recommended by other specialists.

I am very glad that my article has called forth Dr. Taylor's remarks on the raspberry-like "fungus or abortive vesicles" which "mislead the patients and sometimes even physicians."

Respectfully yours,

H. J. Garrigues, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 2, 1882, to April 8, 1882.

Greenleaf, Charles R., Major and Surgeon. Relieved from duty in Department of Dakota, to proceed to New York City, and on arrival, report by letter to the Surgeon-General. S. O. 78, A. G. O., April 5, 1882.

Woodhull, A. A., Major and Surgeon, now awaiting orders, to report in person to the Commanding Officer of the Recruiting Department, David's Island, N. Y. H., for duty at that post. S. O. 78, C. S., A. G. O.

Williams, John W., Major and Surgeon. Relieved from duty in Department of the Missouri, to proceed to Washington, D.C., and report to the Surgeon-General. S. O. 78, C. S., A. G. O.

Waters, W. E., Major and Surgeon. Relieved from duty in Department of Texas, to proceed to Washington, D.C., and report to the Surgeon-General. S. O. 78, C. S., A. G. O.

Jaquett, G. P., Major and Surgeon. Relieved from duty at David's Island, N. Y. H., to proceed to his home and report by letter to the Surgeon-General. S. O. 78, C. S., A. G. O.

Brown, J. M., Major and Surgeon. Relieved from duty in Department of the Missouri, to proceed to Cincinnati, O., and on arrival report by letter to the Surgeon-General. S. O. 78, C. S., A. G. O.

Cleary, P. J. A., Captain and Assistant-Surgeon. Relieved from duty in the Department of the East, and, on expiration of his present sick leave of absence, to report by letter to the Surgeon-General. S. O. 78, C. S., A. G. O.

Lauderdale, J. V., Captain and Assistant-Surgeon. Having reported by letter to these Headquarters, is assigned to duty at Fort Sully, D. T., to which post he will proceed and report for duty. S. O. 47, Department of Dakota, March 27, 1882.

Mosely, E. B., Captain and Assistant-Surgeon. Relieved from duty in the Department of the Platte, to proceed to New York City and, on arriving, report by letter to the Surgeon-General. S. O. 78, C. S., A. G. O.

Maus, L. M., Captain and Assistant-Surgeon. Relieved from duty at David's Island, N. Y. H., and to report in person to the Commanding-General, Department of the Missouri, for assignment to duty. S. O. 78, C. S., A. G. O.

Kilbourne, H. S., Captain and Assistant-Surgeon. Relieved from duty in Department of the East, and to report in person to the Commanding General Department of Dakota, for assignment to duty. S. O. 78, C. S., A. G. O.

Taylor, M. E., Captain and Assistant-Surgeon. Relieved from duty in Department of the Missouri, to proceed to St. Louis, Mo., and, on arrival, report by letter to the Surgeon General. S. O. 78, C. S., A. G. O.

Corbusier, W. H., Captain and Assistant-Surgeon, now awaiting orders, to report in person to the Commanding-General, Department of the East, for assignment to duty. S. O. 78, C. S., A. G. O.

Cunningham, T. A., Captain and Assistant-Surgeon. Granted leave of absence for fifteen days, to take effect on arrival of A. A. Surgeon Artaud at Mount Vernon Barracks, Ala. S. O. 40, Department of the South, April 3, 1882.

Davis, W. B., Captain and Assistant-Surgeon,

now awaiting orders, to report in person to the Commanding-General, Department of the Platte, for assignment to duty. S. O. 78, C. S., A. G. O.

Cherbonnier, A. V., Captain and Medical Storekeeper. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 77, A G. O., April 4, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 8, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 1, 1882	11	5	248	5	200	82	32	0
April 8, 1882	18	2	203	6	177	103	12	0

American Medical Association.—The Secretary of the Surgical Section of the American Medical Association requests all gentlemen who are writing papers to be read before that section at its next meeting to notify him at least one month before the time of meeting, and also to give at the same time the titles of their papers and their probable length. By so doing the titles will be published in time for the members to be prepared for the proper discussion of the various subjects, and he suggests that all gentlemen taking part in the debates reduce their remarks to writing, so that the report can be made more accurate and valuable as a mirror of present scientific thought. Communications should be addressed Wm. A. Byrd, M.D., Secretary Surgical Section American Medical Association, 407 Jersey Street, Quincy, Illinois.

The "Powder-blower" for Iodoform.—Dr. W. M. Chamberlain, of this city, writes: "Dr. Sands, in his paper on iodoform, commends the use of the pepper-box as an instrument for applying the drug. I have lately employed the domestic powder-blower, devised and dedicated to the 'cimex lectularius,' for this purpose. With it it is easy to incrust the walls of sinuses and hollow wounds. It sends the powder just where it is wanted, makes it stick to the surface, avoids soiling the fingers or bedding, and minimizes the smell and the waste. The latter is a consideration, for iodoform is expensive."

Reflex Genital Irritation.—Dr. William G. Wilson, of Shelbyville, Illinois, writes: "The case of reflex genital irritation to the ear, recited by Dr. Samuel Sexton in his communication to The Medical Record of March 25th, to explain his object in pointing it out in the discussion of Dr. Foster's paper at the December meeting of the Materia Medica Society, has forcibly reminded me of a case that I have had under observation, and since such cases are comparatively so infrequent that not one of the three or four doctors to whom I have mentioned it ever met with a similar one, I thought it might be of interest to some of the readers of the Record.

A physician since his first recollection has been subject to reflex otalgia from irritation of the glans penis, such as is caused by the imprisonment of a hair in the corona for several hours by the prepuce. It is accompanied by tinnitus, and appears to be propagated from the glans in the direction of the ear. The otalgia, when the irritation is on the middle of the dorsum of the glans or extends to both sides, is in both ears, but only in the ear corresponding to the side on which is the irritation when but one side is affected. Though the pain is not severe, the patient is so distressed by an indescribable attendant nervousness that he gets rid of the primary irritation, together with the ear-trouble, the first opportunity, by the application of a little cold water to the glans."

The Buffalo Medical College has had the library of the late Dr. White donated to it. At its commencement, February 21st, sixty-five students were graduated.

Bovine vs. Human Virus.—Dr. Kempf (*Louisville Med. News*) finds that bovine virus takes in but a minority of cases. If, however, the crust from the first humanized virus be used, the vaccination takes in nearly every case.

Oophorectomy has been made the basis of a suit for malpractice in Grand Rapids, Michigan. It is claimed that the operation was both uncalled for and bunglingly done, as the patient died.

The Tennessee State Medical Society meets on the first Tuesday of May.

At the Commencement of the Medical and Dental College of Tennessee University fifty-three doctors and twelve dentists were graduated.

St. Petersburg, a city of nearly a million inhabitants, has seventeen hospitals, with a sick population of eight thousand two hundred and forty-four.

Medical Æsthetics. — The "Song from 'Patience,'" published in the Record some time ago, has been widely quoted, and not always properly credited. It was written by a member of the Record staff. The *Canada Medical and Surgical Journal* has given it a more cosmopolitan character by adding the following verses:

"A Toronto medical man,
A money grub, get-all-you-can,
A society-shirker, night-and-day-worker,
Stick-in-the-mud young man.

"A Montreal medical man,
In-a-very-great-hurry young man,
A rhubarb-and-jalap, cab-at-a-gallop,
Case-in-the-straw young man."

London beer is adulterated with salt to make the customer drink more. This addition is not found necessary in New York.

Syphilis in Asia, though long common in the larger cities, was not introduced into the smaller until about thirty years ago. At that time about 2 per cent. of the population had syphilis, now 20 per cent. are affected.—*Dr. P. Gaidzokyan*, in *Detroit Clinic.*

A Prolific Woman.—Dr. J. J. Rockwell relates the history of a patient who gave birth to seven children in twenty-seven months, five being within a year. The mother was twenty-eight years old, and herself a twin. The children were born as twins twice, and triplets once. They all died within a few weeks.—*Ohio Medical Journal.*

"Chronic Pyæmia from Gonorrhœa" is the title of a very carefully written article by Surgeon-General Wales in *Walsh's Retrospect.*

Dr. Reuben A. Vance has been elected Professor of Operative Surgery and Clinical Surgery in the Medical Department of Wooster University, Cleveland, Ohio.

New Signs—The sign painter is now very busy, and the young graduate is bent on getting the most for his money.

The Kentucky State Medical Society met April 5th, in the city of Louisville.

Therapeutical Indications for Ergot.—Dr. E. Evetzky, in the *New York Medical Journal*, after a careful study of that drug, sums up his views regarding its action under five heads:

First: Disorders of the circulation and diseases of the organs of circulation. Second: Paretic conditions of the organs composed of organic muscular tissue, the circulatory system excepted. Third: Inflammatory and other morbid enlargements and growths. Fourth: Abnormal secretions. Fifth: Symptoms referable to the nervous system, and depending chiefly upon circulatory disorders within it. In regard to contra-indications to the use of ergot, it should be used with extreme caution in patients with an enfeebled heart. Pregnancy is not an absolute contra-indication. The use of the drug should be suspended during menstruation, unless it is given for some special condition of that function. To avoid disturbing the digestion it is best to give the drug by the rectum or hypodermically.

Madrid has twenty-three medical journals, Paris a much larger number.

The Cook County Hospital, Chicago, is to be placed in part under the professional control of homœopaths, and the other part under the care of the regular medical profession.—*Ohio Medical Journal.*

Starling Medical College has graduated 52 students this year; Columbus Medical College, 59.

A Society for Physical Research has recently been formed in Dublin, with Professor Henry Sidgwick, of Trinity College, Cambridge, as its President. The object is to examine into and explain by physical laws the various recondite phenomena of mesmerism, spiritualism, etc.

The legal position of a Professor in a college, according to a recent decision of the Supreme Court of Pennsylvania, is merely that of an employee. He can be summarily dismissed at any time, therefore, by the corporation owning the college.—*Philadelphia Medical Times.*

Hofrath Professor Billroth has been to Bordeaux with his two assistants, Drs. Wölfer and Gersuny, in order to perform the operation of resection of the stomach. Germany has again conquered France.

An Old Physician.—Dr. Karl Friedrich, of Hensinger, Professor in the University of Marburg, on February 28th celebrated his ninetieth birthday and the seventieth year of his professional practice.

Dr. Alfred L. Carroll, of Staten Island, intends, it is said, to remove to Baltimore, having been elected one of the Faculty of the Johns Hopkins University.

On Mineral Pulp as an Adulterant of Bread.—A sample of bread made from flour adulterated with soapstone pulp, in the proportion of two tablespoonfuls of the adulterant to a teacupful of flour, together with a specimen of the pulp, has been submitted to the National Board of Health for examination by a correspondent in Easton, Pennsylvania. It is considered unlikely that this adulteration is used to any great extent.

The Medico-Legal Society has received cash subscriptions of $600 and a large number of books for the new library they are forming.

Death of Dr. Edward L. Beadle.—Dr. E. L. Beadle died last week at his residence, near Poughkeepsie. Dr. Beadle was formerly a prominent practitioner in this city. He held many offices in medical and other societies. He was a Public School Commissioner of this city between 1840 and 1850; was President at one time of the New York County Medical Society, and for many years Vice-President of the College of Physicians and Surgeons, and one of the Trustees of Columbia College. He held the two last-named offices at the time of his death. He was also at different times President of the Medical and Surgical Society, and one of the managers of the Institute for the Blind.

Death rates in 1880.—New York City, 26.31 per 1,000; Philadelphia, 21.65; Brooklyn, 23.33; Boston, 23.7; Baltimore, 24.32; London, 22.2; Paris, 29.0; Berlin, 29.9; Vienna, 27.2; Amsterdam, 27.2; Copenhagen, 25.0; Stockholm, 28.8; St. Petersburg, 46.1; Madrid, 40.1; Rome, 32.0.

Payment of the Government Experts.—Mr. Scoville, counsel for Guiteau, has prepared a petition to the House of Representatives asking that the bill recently introduced to pay medical experts for the Government, be amended by adding a section authorizing the Department of Justice to audit and pay claims for legal services of counsel for the defense.

Miss Lonsdale, who came prominently forward some time ago as a defender of unpopular changes introduced into Guy's Hospital under the new matron, and who is also author of the "Life of Sister Dora," has handed over the profits derived from publication of the latter work—no less a sum than 1,200*l.*—in aid of a convalescent hospital at Milford, near Stafford. This is designed to be a memorial to "Sister Dora," who founded and chiefly maintained the Cottage Hospital at Walsall. It will cost 2,000*l.*, toward which 1,400*l.*, including the 1,200*l.* referred to, has been subscribed.

The New York Neurological Society held its annual meeting April 4, 1882. The following officers were elected for the ensuing year: *President*, E. C. Spitzka, M.D.; *First Vice-President*, William J. Morton, M.D.; *Second Vice-President*, A. D. Rockwell, M.D.; *Recording Secretary*, Graeme M. Hammond, M.D.; *Corresponding Secretary*, Mary Putnam-Jacobi, M.D.; *Treasurer*, E. C. Harwood, M.D.; *Councillors*, T. A. McBride, M.D., W. R. Birdsall, M.D., E. C. Seguin, M.D., C. L. Dana, M.D., L. C. Gray, M.D.

A Picture by Baraul, containing five hundred members of the International Congress, is completed.

A New Hospital in Bridgeport, Conn., is likely to be built.

Original Lectures.

CLINICAL LECTURE ON A CASE OF PARAPLEGIA.

Delivered at St. Mary's Hospital, London,

By C. HANDFIELD JONES, M.B., Cantab., F.R.S.,

SENIOR PHYSICIAN TO THE HOSPITAL.

FALL—CONCUSSION, NOT SEVERE, OF SPINE—CONSECUTIVE MYELITIS OF GRADUAL DEVELOPMENT—PERINEAL ABSCESS AND SLOUGHING—PROLONGED TREATMENT—ULTIMATE COMPLETE RECOVERY.

Gentlemen: The case I am about to bring before you excited a good deal of interest while the patient was yet with us, and I gladly accede to the request made to me by one of my former clerks, that I should make it the subject of a clinical lecture. Most cases carefully observed afford us one or more useful lessons, and this is certainly true of our text for today. So let us proceed to our story. H——, aged thirty, came to us first early in August, 1881. He had been a soldier, and looked it every inch of him. Not a carpet knight, or of the Lounge Brigade, who thinks it "a baw to be a real soldier," as *Punch* puts it. He had seen active service, and knew the smell of powder. His manner was that of one who was trained to discipline, who had learned to respect himself and others. And there was also the impress of culture upon him, as indeed there well might be, for he came of gentle blood, and had graduated at Oxford, as we heard later. He came to us only for a few days, at the request of one of our governors, for he was on his way to Chelsea Hospital, but could not be admitted until the Circumlocution Office had got some necessary papers ready. Ordinarily under such circumstances he would have come and gone with little thought on our part, as his condition was regarded hopeless, and he did not ask us for treatment. But I chanced, or shall I say, was led to see him. And seeing him I could not but feel for him. There he lay, a stalwart young man, in the very prime of his days, a hopeless paraplegic, apparently laid aside from an honorable calling in which he might have won fame, and reduced to live out the many weary years of a bed-ridden life in an asylum. He might have repeated to himself the sad lines of an old plaint, which, perhaps, you may remember:

> "They are gone, they are all passed by;
> They in whose wars I had borne my part;
> They whom I lived with a brother's heart;
> They have left me here to die.
> Sound again, Clarion;
> Clarion pour thy blast;
> Sound, for the captive's dream of hope is past."

Something, perhaps, of the physician's instinct, some insufficient—I admit—examination, some moulding of the mental conception by the longing will, led me to conceive, and think, and say that I did not regard his case as hopeless. I knew not then, or at least imperfectly, how much had been done for him, what crafty (kraftig) brains and skilful hands had worked for him through ten weary months, yet with small success. Had I fully appreciated this, I should probably have been silent, and not ventured to rekindle hopes that had well-nigh died out. But having committed myself, when the poor fellow eagerly caught at the straw I had thrown to him, and pressed to be allowed to come to St. Mary's to be under my care, I could not draw back. I believe I half repented of my audacious speech when I was thu challenged to carry it into effect, and represented to him that he would get as good medical care at Chelsea Hospital as any I could give him, and that it might not be desirable for him to quit so soon the refuge which was open to him. But it was of no avail, and accordingly some six or eight weeks later, on October 12, 1881, he was again admitted into our wards. He gave us the following history: His father died of heart disease, at the age of seventy-five; his mother is still living, but has been a confirmed invalid as long as he can remember. Brothers and sisters are fairly healthy. When in India, in 1878, he had what was called enteric fever for four months—"half the regiment had it." He had ague once before the fever, and several times afterward. He also had a slight sunstroke. He has had palpitation of the heart all his life, more or less, and especially of late years. No history or indication of syphilis. Has been somewhat wild, but not intemperate. His general good conduct seems to be affirmed by his statement that he was shortly to have been recommended for a commission when his illness commenced.

On November 8, 1879, he was pursuing the enemy in Afghanistan, when his horse fell, and he came down in a sitting posture. He got up, mounted again, continued the pursuit, and rode back into camp, a distance of a mile, not knowing that he was hurt. He did regular duty for a day and a half, having no local pain, only feeling generally shaken. On the afternoon of the second day he was lying in his tent when he was suddenly seized with severe pain in the perineum. He was then taken to the field hospital, and on the fifth day after his fall an abscess was opened in his perineum. He lay up and had the abscess dressed for a month, and then was sent with invalids to Peshawur. He was carried in a dhoolie, and owing, as it was supposed, to severe jolting, an abscess formed in the scrotum. When he got to Peshawur he was insensible, and remained so on and off for three or four days. Was in a high fever until the abscess burst. Part of the skin of scrotum and penis sloughed away. He lay ill till February 18, 1880, when he was invalided to England. When he reached Deolatie he was found by the surgeon to be paraplegic. Until this time neither he nor his medical attendants had any idea that his inability to walk proceeded from any other cause than weakness.

On May 24, 1880, he went to Netley and remained there till November 15th of the same year, when he was discharged as unfit for further service. Dr. Vacy Ash, an old St. Mary's man, had him in charge during his stay at Netley, and has favored me with the following note respecting his condition: "My own impression from his tale was that the sudden shock in the saddle from the horse buck-jumping, ruptured the urethra, either by direct violence or from muscular exertion, admitting of extravasation of urine and subsequent suppuration and sloughing. I have myself seen a similar result from a somewhat similar accident. It could, I think, have been in no way due to the effect of the paralysis at so early a date. The direct effect of the blow on the spinal column is somewhat obscure. The symptoms developing so slowly points to concussion rather than pressure from clot. Whichever it was, consecutive myelitis undoubtedly followed, the anterior columns suffering most. His symptoms here pointed to derangement of the system from want of exercise and nutrition;

dyspepsia, evidenced by furred tongue, constipation, etc. His urine contained triple phosphates and epithelial *débris*. He suffered also from severe vertigo. His heart, lungs, and temperature were normal for the most part. He had perfect control over bladder and rectum. In the recumbent position he could pull up his legs and feel the bedclothes. In attempting to walk, his legs dragged. Shooting pains were frequently complained of, invariably produced when near a fire, and then only he felt his legs cold. My own private notes on his case bear this epitome out. I could do him no good in spite of the continuous current of electricity and the usual remedies in such cases."

During the time which elapsed between his leaving Netley and entering the Queen Square Hospital he resided at Tunbridge Wells, and was under the care of an excellent practitioner there, but I do not know what treatment was employed.

Nearly five months after he left Netley he was received into the Queen Square Hospital, and placed under Dr. Radcliffe's care. I am very much indebted to him and to his medical resident, Dr. Beevor, for the following notes of H——'s case, which they have kindly sent me: "Duration of patient's stay in the hospital from April 4th to August 8th, 1881. He looked a strongly made man. Arms and upper part of body not affected. Spine is free from curvature, but is tender to percussion from the seventh dorsal vertebra downward, but especially in the lumbar region, where slight percussion causes much wincing. He sometimes has pain in lower part of spine, shooting upward, and at same time has then the feeling of a tight cord round his waist. His legs do not look very wasted, but he says they are much smaller than they used to be. He cannot move the hips, knees, or ankles at all, but can just flex the toes a very little. No stiffness in the joints. Both legs feel cold below the knees. Patellar tendon reflex increased on both sides. No ankle clonus. Plantar reflex just obtained on both sides. Abdominal and epigastric reflexes present on both sides. Sensibility not affected, but on outer part of right thigh, as far as the knee, the skin feels different to him, and he has curious tingling there. Sphincters not affected; he can hold his water, and is not obliged to pass it so soon as he feels the desire to micturate. He was ordered liq. hydr. biehl., ʒ j., t. d., and the constant current passed from the back to the feet in water, and then the current to be reversed two or three times.

"June 13th.—Is able to move his legs a little. Ordered to lie on his bed, and to practise moving his legs, the attendant helping him.

"July 7th.—Is able to extend and flex the ankles when one knee is crossed over the other; complains of severe aching pains in his limbs."

He says that Dr. Radcliffe employed the constant current every day, and he thinks that he derived very material benefit from it.

We now commence our own reports. Patient is a tall, intelligent, fairly well-nourished man, has been muscular, estimates that his legs are nearly one-third smaller than when he was in health. He used to weigh 156 pounds, his weight about two months later was 143½ pounds, and in all probability was not more at this date. He used to measure 16 inches round his calf, now he measures only 12. He cannot make the least attempt at standing, in fact some two or three weeks later, when holding by his arms to a horizontal staff, his legs sprawled about feebly and helplessly. No ankle clonus, or plantar reflex, but rather excessive patellar tendon reflex in both legs. Sensation seems quite perfect everywhere, except, probably, at the lower anterior part of right thigh, where twelve days later electric sensibility was much impaired, though the sense of contact was good. In the earlier period of his malady, he says, his legs were decidedly hyperæsthetic. When lying on his side, one or other, he can flex the legs a good deal, but slowly and feebly, and can extend them also, especially when the limb is lifted from the bed so that it can move easily without friction against the bedclothes. When he is semi-recumbent on his back he can't move his legs nearly so much; can scarcely bend the knees at all. This is probably on account of the greater friction of the soles on the bed. He is quite unable to overcome the resistance of a moderately strong arm. When he is trying to flex the lower limbs the long flexors are felt quite rigid, or else in a state of tremor. They seem to be unable to shorten as they normally should, and with great show of effort little result follows. Sometimes it appears as if the volitional impulse could not be limited to the group of muscles intended to be used; thus, while an effort is being made to flex the knee, the extensors are apt to contract too, but with more of tremor than actual systole. He is very sensitive to chill, which will cause tremor also. His intellect is quite clear. He sleeps well He has perfect control over both bowels and bladder. The large muscles on the anterior aspect of both thighs and both legs were very inert to faradization. The current was felt slightly in the posterior part of right thigh, the large muscles here are inert; current is felt still less in left thigh, and its posterior muscles are quite inert. The posterior muscles of the right calf are quite inert, but the current is felt well. State of left calf almost certainly similar, but not mentioned. With galvanization (interrupted) the anterior muscles of right and left thighs are quite inert, and current is hardly felt. The anterior tibial muscles of both legs are inert, the current is felt more in the left than in the right. The posterior muscles of both thighs are all inert, those ot both legs are in same state. Right gluteus maximus responds to current, which is keenly felt. Left gluteal region is very sensitive, and muscle responds well.

Heart's dulness area small, impulse weak, but in normal site; both sounds faint; no murmur. Pulse 70, compressible, regular, soft. Lungs normal, expand well. Appetite fair, but he has been troubled with water-brash the last three weeks. Bowels quite regular. Splenic dulness extends from sixth rib to crest of ilium. Ordinary diet; wine, 4 oz. Quiniæ disulphatis, gr. v., t. d. Balm c. pot. sulphuret, ʒ iv., o. n.

October 14th.—Had sulphur bath for twenty minutes last night; after being in it some time he got light-headed, a feeling of dread came over him, and he feared to be left alone; he felt so weak that he could hardly raise his arms to the edge of the bath; perspiration poured off his head, and he felt much weaker than when he went in. When taken out he was in a half fainting condition, and when put to bed soon went to sleep. All next day he had headache, and, on first waking, his sensations were similar to those of a man who has taken too much overnight. Otherwise he feels well to-day. A second bath the following night for only fifteen minutes was borne better; he shivered considerably after it; wine was given. A mustard bath some days later made him red all over like a scarlatinal patient, and

pro luced some mental excitement, which passed off in an hour or so. The object of these cutaneous stimulations was to excite reflexly the elements of the injured spinal cord to a better nutrition. The idea was rational, but the trials I made were not encouraging and were not continued. On passing a catheter to ascertain the state of the urethra it was found throughout excessively sensitive, and this, together with the evident hyperexcitability of the lower limbs, seemed to indicate a trial of calmatives. So on October 17th the quinine was replaced by the following: Ammon. bromid., gr. xv.; tr. belladon., ℥. xv.; spt. chlorof., ℥. x.; aq. chlorof., ℥ j., t. d. On 21st a blister, 3×2 inches, was applied to lumbar spine. Passive exercise of the limbs was performed daily, and the continuous current passed through their different segments for seventy-five minutes daily also.

October 27th.—When he tries to flex his knees it is very evident that he cannot direct the volitional stimulus to the flexor muscles alone, the extensors act at the same time. Both heels are of a full dull red, a pale spot from pressure fades rather slowly. Phosphori, gr. $\frac{1}{33}$ t. d., commenced three days ago. Dose of bromide to be increased to gr. xx., and of tr. bellad. to ℥. xx; pot. iod., gr. v., to be added.

November 1st.—He can, by great exertion, bend both knees, raising the ham more than a handbreadth from the bed, but a great deal of spasm occurs, and the long flexors get very rigid; the quadriceps extensor also acts to some extent. To lessen the tendency to spasm, gr. $\frac{1}{60}$ of atropia was injected subcutaneously, but it caused sickness, and was not repeated.

November 10th.—The muscles of all the regions of the lower limbs above the feet reach pretty well to the current from my own battery (faradaic), which gives a larger spark and slower interruptions than the hospital one. The long flexors of the thigh are least active. He feels much exhausted after faradization, and so he does after efforts to use his paralyzed muscles. The dose of pot. iod. which has been gradually increased is now augmented to gr. 20 and is to be taken with ammon. carb., gr. 4; tr. cinchonæ, ʒ j.; dec. cinch., ℈ j., ter die.

November 15th. — Yesterday, was unwell and squeamish; to-day, complains much of giddiness and of inability to read more than two or three minutes, the letters becoming blurred and fading away; he has nausea, loss of appetite, general malaise, and passed a very bad night, shivering as he did when he had ague. Temperature, 97.4°; pulse, cordy, compressible, 76; urine (of 13th), clear, light yellow, neutral, and not albuminous. Tongue very foul.

November 17th.—Head was relieved decidedly by a hot pediluvium last night, but is very bad again to-day, he has much vertigo, and cannot fix his eyes steadily on any object; his head is not painful but uneasy, not hot; bowels open. Temperature at 4 P.M., 98°. Ordered tr. veratri viridis, ℥ ij.; m. camph., ℈ ss.; 4 tis. h., and sinapism to nucha. He was relieved by the first dose and sinapism, and was much better the next day.

November 22d.—Has had slight fever last two days, commencing with 100.2° on 20th P.M., on 21st marking 99.6° A.M. and 101° P.M., on 22d 100° A.M. and 98.9° P.M., afterward normal. He feels better, but varies. Is always worse in evening and all night, better about midday. Is still unable to read with comfort. A few papules on abdomen; much like typhoid spots, but more raised. Some diarrhœa. Began yesterday quiniæ disulph., gr. iv., quater die. Splenic dulness is extensive, occupying lower left side of chest for six finger-breadths, and below ribs reaching to crest of ilium, and anteriorly extending to v. n. l. Port, ℈ vij.

December 6th.—His muscles, especially the quadriceps extensors of thighs, contract largely to a pretty strong faradaic current, yet they seem to exert but little force. This has been observed some time. He can, by a great effort, which fatigues him much, draw up his leg—one or other—until it is quite vertical, the heel directly under the knee. While the long flexors of the thighs are well contracted, and the hamstring tendons tense, the legs are not moved. He can extend the flexed leg more readily, but with little force. He can move his toes with the extensor communis digitorum, and the foot at the ankle very slightly. He can raise the heel a very little from the ground when sitting on the edge of his bed, but is quite unable to lift the foot from the floor. He has much more power of moving his legs when he lies down flat then when he half sits up. Quinine omitted November 30th. Bass' ale, one pint, in place of wine on December 2d. Ordered on December 10th, ammon. carbonatis, gr. iv; tr. cinchonæ, ʒ j.; infus. cascarill., ℈ j., t.d. Port, ℈ iv.

December 12th.—When the current is interrupted slowly, moving the hammer with the finger so as to make about two interruptions per second, the muscles contract very much more strongly and effectively than when the interruptions are rapid, and the pain caused is much less acute; he speaks of it more as an aching.

December 14th.—With interrupted galvanism very little action occurs in either quadriceps extensor, but much pain is produced, he says it feels like tearing off the flesh. Both anterior and posterior groups of leg-muscles act well, the left best. Plantar reflex distinct and equal in both feet. Abdominal reflex present also on both sides.

December 19th.—Stood alone to-day for the first time, only just, and only for a second or two. He managed afterward with support to walk, after a fashion, a few steps, his legs sprawling about, but little under control. When lying in bed on his back he can draw up an eight pound weight by flexing his legs, a cord being attached to the weight and to his ankles, and passing over a pulley.

December 26th.—Last four days he has been able to get about with the assistance of an arm, and even without, walking a good many steps. He separates his feet widely, and is by no no means firm on his legs. He has no power whatever of flexing the thighs on the pelvis. He walked to-day about seventeen yards without putting his stick to the ground. On 28th was ordered sodæ hypophosphitis, gr. xv.; inf. cascarill., ℈ j., ter die; also ol. morrh., ʒ j., o. n.

December 29th.—In addition to faradizing the quadriceps and anterior tibial groups it was decided to pay special attention to the psoas muscles. Long interruptions and a moderate current to be used. Current to be passed from outer edge of quadratus lumborum muscle to spot just below Poupart's ligament, where the psoas-iliacus issues from the abdomen. In the evening, when walking about in the wards, his walking visibly improved, the feet being brought closer together, each foot put well before the other, and the whole done quite quietly. He said he felt more spring in his legs.

January 6. 1882.—Last few days has had much aching in feet and sense of heat, the latter increased by walking, the former not; he has also a

bruised aching feeling in feet after standing or walking a little. The feet used to be very cold, but are tolerably warm now. The bruised aching feeling when he walks is exaggerated into pain. The aching decreases when he lies down, but the sense of heat does not. At night he has to shift his feet about to find a cool place, whereas formerly his feet were always cold. The feet not only feel hot to him, but are actually hot (Mr. Rowe). When the feet are at rest he has no pain or numbness in them, only a slight sense of heat. He has no other pain than the bruised feeling. Has very little power over his feet, can walk, but can hardly use them in any other way. When seated he can only raise the heels a little, the toes scarce at all. When standing he can raise his heels nearly an inch from the floor. He cannot ascend stairs, cannot raise at all his whole foot from the ground. Nothing amiss to be seen in feet. The pain is most felt on dorsum of each foot at proximal end of metatarsal bones. He had once a sensation as if his feet were wrapped in a poultice, but has none of that now. Says if his feet were right he could walk perfectly. Has no power of rising from a seat, even a high one, without using his hands. About this time, when he was seated on an ordinary ward table, and was requested to get on his feet, his knees quite gave way under him, he sank down, and had to be raised to his feet. He could walk fairly well then. Has still some soreness and bruised feeling in calves. This first appeared on January 1st, after a warm bath. Urine quite normal.

January 7th.—Walks very well to-day, raising his advancing foot from the floor, but when seated on the edge of his bed cannot raise his foot at all, and only lifts the heel or the toe slightly. When I challenge him to raise his foot from the floor he replies that he knows how to do it with his head, but not with his legs. Has been taking last two days extracti ergotæ liquid., ℥j.; pot. iod., gr. v.; aq., ℥j., t. d. This I had prescribed, having some apprehension lest the pains in the feet should be those of recrudescing myelitis, but as they seemed to be almost entirely produced by the act of walking, and subsided when he rested, and as his motive power was certainly improving I put aside my fears to-day and bade him resume the hypophosphite mixture and to take also ferri carb. sacch., gr. xx., bis die. The next achievement, attempted about January 12th, was to get him to walk upstairs. There is a longish flight of stone steps leading from his ward to the floor above, with a landing half way. I led him to the foot and encouraged him to make an effort. He looked up helplessly and almost hopelessly at the ascent, reminding me of some baffled mountain clamberer, who after long toil quails at last before the long steep slope which leads to the top. However, this slope had what the Alpine slope has not, viz., a stout balustrade on one side, and a good hand-rail on the other. The latter he grasped with his hands and then chiefly by dragging his frame higher, while his legs sprawled sideways along the stairs, but still aided him somewhat, he struggled up. It was quite remarkable to see how little power he had to raise his feet at this time, when he was walking quite well on a level floor.

January 24th.—About the 19th he managed to get upstairs without hauling himself up by means of his hands. To-day he went up to the top landing, two flights, without using his hands and without help of any kind. He cannot carry the advancing foot to the stair above that on which the other rests, but places it on the latter and then repeats the movement. He says that going up is the hardest work, but that the descent is by no means easy, and shakes him much. Of course he feels tired in the legs after this exertion, but the distressing feeling of weariness he had before has gone. He can raise his foot from the ground as high as the other knee, and though he brings it down with a stamp there is none of the running forward noticed before. Without using his hands he can raise himself when sitting on his bed, but the effort is violent and is really a throwing of himself forward. He can stand on either leg if he rests his hand on anything, but he cannot keep up the leg which is raised, or raise the extended leg.

January 28th.—Went out for a walk for the first time. Ankles and feet ache much from going up and down stairs. He cannot rise from a chair without help; cannot run at all.

February 8th.—Goes out every day and gets less tired each time. General health is excellent. Walks up-stairs far more evenly and with apparently no effort. He takes now the alternate stairs with each foot quite naturally, and can even do two steps at a time. Comes down-stairs quite naturally, though he says he has to be careful to keep his balance. He makes a nearer approach to a run than hitherto, but it does not amount to more than a shamble. Can rise to his feet from a chair quite easily and quietly now, but a few days ago he had to make a considerable effort, and his legs jerked him up and down for a second or so after. His feet, which used to be cold at night, are now very hot, and ache a good deal. Temperature of soles of feet about January 24th was 98.4°. Patella reflex is still exaggerated. Can walk round the Serpentine with only two rests. Mr. Rowe remarks that any one seeing him walk about, or go up-stairs would think nothing was the matter with him. He left the hospital to-day. His power of flexion and extension of his legs far exceeded the resistance which could be exerted by an ordinary arm.

Remarks.—The *pathology* of this case seems tolerably clear. I had originally imagined that the perineal mischief had a good deal to do in the matter, and that the paraplegia was, to some extent at least, of inhibitory origin; but, after careful examination, I gave up this view, and arrived independently at the same opinion as Dr. Ash. The myelitis could not have been of great severity, could hardly have caused destructive softening or fibroid degeneration, or notable wasting of the nerve-tissue. The diminution of his leg muscles, gastrocnemii, etc., by four inches in the girth, was of bad omen, but though so much had gone, a large amount yet remained, which, though seriously devitalized, was capable of recuperating its faculties satisfactorily. Some atrophy of the cells in the anterior horns must, I suppose, have occurred, but fortunately did not progress. Probably his young age stood him in good stead, and his generally sound constitution. Had he been twenty years older, had he been strumous or syphilitic, the event might have been very different. I think we do not always sufficiently consider the quality of the tissues involved in cases of inflammation, the degree of their resisting power; we are too apt to think of inflammation as a uniform process. Yet, practically, the recuperative power of the tissue rules the issue. The lesion was localized in the lower part of the cord, but seems not to have involved its whole thickness. While the origins of the crural and sciatic nerves were gravely affected, those of the gluteal and the rectal and vesical were intact.

This looks as if some spots in the cord had not been invaded by the inflammatory process, or, at any rate, had suffered slightly. As the abdominal reflex was present when he was at his worst, it is pretty certain that the lesion never extended above the origin of the eighth dorsal nerve, and probably not so high. The deficiency of the plantar reflex indicates that the lesion extended very low.

The *symptoms*, especially in their subsidence, presented much that was interesting. At first, and for a considerable time, *tremor* was a marked feature. It occurred whenever the volitional stimulus, though able to produce some normal contraction, failed of its due effect, either from fault in the muscle or nerve, or in both. It was evidently to a large extent involuntary, resembling a good deal the ankle clonus, and, like it, depended very much upon a morbid excitability of the nervo-muscular apparatus. Tremor, whether senile or alcoholic, or tonic (as mercurial), or resulting from fatigue, always implies diminution of "resistance," of that power by which a nerve-cell regulates the evolution of force. The failure of this faculty, often existing *pari passu*, with failure of that which generates force, conditionates hyper-excitability. Together with tremor, *rigidity* of half-contracted muscle was often present. It seemed when the muscle could no longer shorten, from its inability to move the weight of the limb or to overcome friction, that it became, as it were, tetanized. This phenomenon was evidently allied to tremor, and was probably produced in the same way, viz., by rapid escape of stimulus. The blending of the two is well described in one of Mr. Rowe's notes. "When H—— attempts flexion the muscles become hard and tense, but after a time flexion stops and tremor begins, the muscles still continuing hard."

Another noteworthy point was the *slowness* with which motor impulses arrived at the muscles. His own remark was: "I will to perform a movement some time before I feel the execution of it." Even at an early date it was observed that his muscles acted in a dilatory manner to faradism, though the contraction, when it occurred, was fairly good. We could not measure accurately the time occupied in the passage, but it certainly appeared to be much longer than that which would have been required in the healthy state, the normal rate of transmission being variously estimated at one hundred to two hundred feet per second. On November 28th, half a second intervened between the word of command and the action.

It was also observed, especially during the earlier period of his stay, that he had difficulty in *directing* his volitional impulses to the part intended, and that they sometimes seemed inclined to go astray, arriving, for instance, at extensor muscles when they should have been confined to flexors.

Both these latter defects indicate that the paths along which the nervous influences should have travelled were not freely opened; that its transmission was more or less impeded, perhaps by the molecular changes in the axis cylinders not being effected readily. The same hypothetical explanation may also be applied to the next feature I have to notice, viz., that he was *able to walk much better after being on his feet some time than he could at first*. Indeed, he used to have so much stiffness of his limbs in the morning on awaking, that for some time he felt quite crippled, and this continued even after he had improved considerably. Prima facie, one would have thought that, after a long repose, the nerve-cells would have accumulated a greater store of energy than they could contain previously, but it appears that, though this may be the case, the energy cannot be so readily evolved at the first essay. The same may be noticed in states where there is no actual disease, as in commencing senility. In all these, preliminary exertion may not increase the amount of energy liberated, but may increase the facility of its transmission, so that the result is that more work can be performed.

Coldness of the feet and lividity were doubtless dependent on a tonic contraction of the arteries quite similar to that which is produced by cold. This seems to be almost a necessary result of inaction of the large muscles, which when functioning vigorously withdraws from the vasomotor nerves the nervous energy which at other times keeps the vessels more or less constricted. In states marked by muscular debility and hyperæsthesia—and H——'s at this time was such—the vasomotor nerves of the limbs are often unduly excitable. This, of course, checks free blood-flow in the muscles, and impedes their nutrition. During recovery, when the large muscles of the limbs were being exerted to the utmost every day, the opposite condition of vasal paralysis, and perhaps somewhat excessive, naturally supervened. A curious circumstance was that he could exert notably more *power with his long flexors when lying nearly flat in the bed* than when half-sitting up. I can only account for this on the hypothesis that in the latter position some nerve-force was diverted to other muscles than those of the lower limbs, so that a less amount was available for the production of flexion. The *increasing energy and effectiveness of the muscular contractions* as improvement went on was very remarkable. Long after he was able to walk about very fairly well he had scarce any power to raise his foot from the ground, and was quite unable to rise to his feet when sitting on a common chair. Yet one would have thought that the muscular power (of the same muscles) which enabled him to do the one would have enabled him to do the other. The muscles certainly were all able to contract well, but more energy was required for the latter actions than for the former, and this the nerve-cells could not at first supply. In fact, to rise easily from a chair was almost the last of his achievements; for some time it required great effort, and was followed by great tremor.

The absence of *ankle clonus coincident with excess of knee reflex* seems to be unusual. Dr. Gowers says that it is just in such conditions that the clonus is best studied. I do not think much can be inferred from the absence of clonus, certainly, its presence is much more significant. In a well-marked case of syphilitic myelitis recently under my care, the plantar and knee reflexes and ankle clonus were all absent.

The *treatment* consisted mainly in the administration internally of quinine or bark, and ammonia, with phosphorus and hypophosphites; the use of the latter especially coincided with rapid improvement. Quinine seemed to be demanded both by the malarious disease he had had and by the persistent enlargement of his spleen, but I cannot say that it was of any marked utility. Iodide and bromide were given for short periods, but did not avail much. *Electricity* was used largely. The constant current was applied, the positive pole at the dorsal region, the negative at the feet, with much regularity, until the later part of his stay. Faradization was also used frequently, and appeared to be really beneficial; he said he always felt better after it. This

testimony is the more reliable because he often suffered a good deal from it. His temperament was not very tolerant of pain, and the cutaneous surface of his lower limbs had at one time been "decidedly hyperæsthetic," and probably were so still, to some extent. The employment of *slow interruptions* was a great gain, the effect being, according to Mr. Rowe's report, to cause much less pain and to produce infinitely more lively contractions even from inert groups of muscles than had been obtained before. Duchenne (p. 742) speaks very positively to the same effect. A slowly interrupted galvanic current was very much more painful than the slowly interrupted faradaic; he described the former as causing a sensation like tearing off the flesh. Where so many remedies were employed it is impossible to speak confidently of the effect of any one, and even to speculate is perhaps not wise. Nevertheless, I confess that while watching H——'s case I had the same idea suggested to me which Dr. R. Reynolds has expressed in his little work on electricity (p. 30), where he says, "It is probable that in these cases the stimulation of the peripheral ends of the muscular nerves may have some reflex influence on the nutrition of the cord, and may assist in the general process of repair." As there is no doubt that damage may be done to the nerve-centres by a violent faradization (*vide* Duchenne, p. 117), there is at least a presumption that a moderate, gentle application of the current may have a converse effect. At p. 824 of T. N. D. I mention facts observed by me, showing that the influence of the faradaic current extends beyond its track, and may be diffused centripetally to the nerve-centres. *Passive movements* were diligently performed by my energetic coadjutor, Mr. Rowe, and aided, I really think, not a little the recovery. Their effect was to produce a feeling of warmth in the paralyzed parts and great comfort. H—— always felt as if he could get up and walk immediately after. I would certainly advise you never to omit this procedure in similar cases. The modus operandi of these movements I conjecture to be of the same nature as that of local faradization; they probably improve the nutrition both of the paralyzed parts and of their nerve-centres. The fundamental idea in all such operations is the solidarity of our organs. A nerve is but an extension of a nerve-centre. The importance of *persevering treatment* in chronic cases, even very unpromising ones, and of measures thoroughly and painstakingly carried out, is well illustrated by two cases of inveterate paraplegia treated by Dr. Morgan, of Manchester, whom I am glad to claim as an old St. Mary's man. He employed electro-puncture (*vide Lancet*). Let your motto be in dealing with disease, "*Nunquam die mori*" (Never despair). It is said Napoleon telegraphed from the field of Waterloo, "I have beaten the English, but they won't go." Of course they wouldn't; they did not admit that they were beaten, and so a few hours later he had to go himself.

As to the symptoms occurring between November 14th and 21th, consisting of vertigo, inability to read, anorexia, general malaise, slight pyrexia, and diarrhœa, I hardly know what cause to assign them to. They may have proceeded from a recurrence of malarial disorder, or from influenza. However this may be, they had no connection with the paraplegia.

The last point I wish to ask your attention to is the *cause of our patient's recovery* after the previous failures. To the lay mind it is no doubt sufficient to say that he passed into the hands of another practitioner, who of course employed some other remedy which the others did not, and therefore he got well. But I am sure neither I nor you could hold such language. The names of Netley and of Queen Square Hospital, are sufficient guarantees that the best skill was employed for our patient. Our diagnosis was the same as their diagnosis; our treatment, with the exception of the hypophosphites, and perhaps faradization, was practically the same as theirs. Up to a late period in H——'s case I had repeated questionings with myself whether I should not resort to the bichloride which Dr. Radcliffe had administered, though I did not then know it. Why, then, you may ask, did not recovery ensue earlier? I believe the answer is contained in the fact that he came to us *last*. We had the advantage of time, and not only that, but of all that had been done before. The last ounce broke the camel's back. While H—— was at Netley the malady was too recent to be easily modified; while he was at Queen Square improvement commenced and the disorder began to yield, so that when he came under our hands the task was materially easier than it had been to our predecessors. This was a chronic disease, but imagine an acute one—say pneumonia or typhus—and you will see at once how important the element of time may be. The patient has been extremely ill for several days, no decided improvement has yet appeared, the friends naturally get anxious and impatient, and resolve to have other advice. You are called in perhaps a day or two before the crisis, and prescribe some fresh remedy. The patient takes a few doses, and forthwith (as soon as the crisis comes) is wonderfully better, and recovers well. Now are you to acquiesce tacitly in the praises that may be showered upon you for your wonderful success, and your imagined superiority to the adviser who has preceded you? *Dus sey fern*, I trust, would be the hearty disclaimer of every one of you. So is it mine as regards the case before us.

One word more only I must add, and that is the expression of my sincere thanks to my excellent clerk, Mr. Rowe, who carried out all my instructions with rare zeal, perseverance, and ability.

THE PHENOMENA OF PARTURITION IN THE LOWER ANIMALS.—The *British Medical Journal* calls attention to the prominence given to zoölogical or comparative pathology at recent sessions of the Pathological Society. In speaking of the field here open for investigation, it says:

"The nature and causes of the remarkable bone and joint diseases simulating osteo-arthritis, gout, rheumatism, and syphilis, in animals, offer a wide field for research. Equally remarkable is the subject of parturition in animals. The female tapir, in giving birth to her offspring, at the Zoölogical Gardens last week, appears to have had an almost painless labor; the agonies suffered by the hippopotamus, and the laceration of her perinæum when her first calf was born at the gardens, are well known to British zoölogists; as is the fact that pure blood exudes in large drops from her skin under such circumstances, and even during paroxysms of what appear to be ill temper. Remarkable facts of this kind might well be applied to scientific purposes and considerations, and not left merely to adorn the pages of sporting journals."

Original Communications.

THE QUESTION OF LAPAROTOMY FOR THE RELIEF OF ACUTE INTESTINAL OBSTRUCTION.*

By HENRY B. SANDS, M.D.,
NEW YORK.

THE remarks which I desire to make in the present communication have been suggested to me by the following singular case that recently came under my observation.

On the evening of January 22, I was asked by Dr. Draper to see a gentleman sixty-seven years of age, who had been suffering, during the previous forty-eight hours, with symptoms of obstruction of the bowels. The patient was a clergyman, who had formerly been robust and healthy, but whose strength had within the past year visibly declined without any assignable cause. Impaired appetite and scanty alvine evacuations, were the only symptoms that had attracted his attention. To overcome what was believed to be an attack of ordinary constipation, he had taken, during the two days previous to my visit, four compound cathartic pills, in divided doses, and a saline cathartic. These remedies induced one or two scanty stools, but caused restlessness and discomfort; and after taking the last dose on January 21st, he began to hiccough and vomited the contents of the stomach, mixed with bile. When I first saw him, the intestinal obstruction seemed to be complete, and it continued so up to the time of his death, which occurred on January 30th, ten days after the commencement of the attack. Two or three times during his illness he voided a small amount of flatus per anum; and hopes were entertained that fecal evacuations would follow. Nothing was passed, however, except the nutritive enemata and the enemata of water which were employed several times with the view of overcoming the obstruction. The vomiting became stercoraceous on the fourth day, the fecal character of the matter vomited growing more decided as the disease progressed. At first, the urine was scanty, but afterward it was passed in normal quantity. A remarkable feature in the case was an entire absence of abdominal pain. Tympanites came on very slowly, and was not at all marked until two days before death.

At the time of my first visit, Dr. Draper and myself carefully examined the abdomen without discovering any clue as to the cause of the obstruction. The abdominal walls were soft and elastic, the only departure from the normal condition being a slight resistance offered to deep pressure when made in the right hypochondrium. But no defined tumor could be distinguished. Opium was administered to allay hiccough, and the use of this drug, either alone or in combination with belladonna or acetate of lead, was continued until toward the close of life. Dr. Van Buren saw the patient on January 23d and 24th, and Dr. Weir on the days following. Dr. Van Buren conjectured that the obstruction might be due to the impaction of a mass of undigested food at some point of the small intestine already narrowed by a cancerous growth. This supposition was strengthened by the result of an examination of the matters vomited. Some of these contained blood, and under the microscope were found by Dr. Draper to exhibit a number of large cells, having large nuclei and nucleoli. Dr. Weir suspected that the obstruction was situated in the large intestine; and, with the view of removing it, three or four copious injections of water were administered while the patient was in the knee elbow position. The water entered freely to the amount of five pints, but returned without a trace of fecal matter.

On January 28, the obstruction remaining unrelieved, it was decided to etherize the patient and make a manual exploration of the rectum. This was done with a negative result, the rectum being naturally so narrow at the level of the peritoneal reflexion over the second part of the gut, as to prevent my hand from passing beyond it. The abdomen was then kneaded in the hope of overcoming some obstruction, concerning the seat or nature of which none of us could form a definite opinion. Colotomy, enterotomy, and laparotomy were considered and rejected, the two former as being too uncertain, and the latter as being both uncertain and dangerous, in view of the patient's age, ill-health, and enfeebled condition. Indeed, at that time there were ominous signs of heart-failure, and any severe operation would doubtless have proved fatal.

On January 29th, croton oil was given, in the hope of removing a possible fecal impaction. The medicine failed to overcome the obstruction, and caused an increase of vomiting and hiccough. The patient sank rapidly during the night, and died on January 30th.

A post-mortem examination showed that the obstruction had been caused by a gall-stone, nearly cylindrical in shape, measuring 1¾ inch in its longer, and 1¼ inch in its shorter diameter. This was found in the ileum, about four feet from the ileo-cæcal junction. The intestine above the obstructed point was congested and distended, while that below it was pale and collapsed. An examination of the gall-bladder revealed a large ulcerated opening, through which the calculus had doubtless escaped into the duodenum, to which the gall-bladder was firmly adherent. Evidences of chronic adhesive peritonitis were present in the neighborhood of the gall-bladder and duodenum, the parts being indurated and matted together by plastic lymph. Besides the lesions described, the liver was quite fatty, and the kidneys granular.

In reviewing this unfortunate case, the most striking feature noticeable is its obscurity. Intestinal obstruction depending on the impaction of a gall-stone is exceedingly rare, constituting not quite four per cent. of all cases. It is also said to be four times more frequent in females than in males. Often the obstruction is preceded by one or more attacks of hepatic colic, with, perhaps, jaundice; and the pain attending the obstruction is almost uniformly sudden and violent. Occasionally the calculus may be felt through the abdominal wall, or its situation indicated by the discovery of a spot tender on pressure, and dull on percussion. In the case reported, these aids to diagnosis were all wanting. The attack was preceded by neither colic nor jaundice, was unaccompanied with pain, nor did the calculus give any physical sign of its presence in the intestinal canal. Moreover, some of the symptoms were evidently misleading, such as the mild course of the disease during the first week, the entire absence of pain, the history of previously failing health, with scanty fecal evacuations, and the discovery in the matters vomited of blood-globules and epithelial

* Read before the New York Surgical Society, February 14, 1882.

structures suggestive of cancer. In short, the symptoms characteristic of the existing lesion were absent, while those present led to erroneous conclusions respecting the cause of the disease. The case thus affords a conspicuous illustration of the diagnostic difficulties that beset the surgeon in his endeavor to give a right interpretation to the complex group of symptoms so often met with in those suffering from intestinal obstruction.

If the cause of obstruction in the case reported had been known, would the operation of abdominal section have been indicated? I think that the answer to this question must be somewhat qualified. If our knowledge were limited to the fact that a gall-stone was the cause of obstruction, laparotomy would, in my judgment, be a very doubtful expedient, inasmuch as such obstructions are well known to have been overcome by the efforts of nature, aided in some instances by medical treatment, or by the simple surgical expedient of abdominal taxis. Much larger gall-stones than the one now exhibited have been passed per anum, and in many cases that recovered the symptoms were very acute. In the "Med. Chir. Transact." of 1815 (vol. vi., p. 98), Mr. Thomas records the case of a lady, aged sixty-three, who, after suffering for five days with the symptoms of complete intestinal obstruction, was suddenly relieved by copious fecal discharge, in one of which was found a biliary calculus a little more than an inch in diameter. It is a curious circumstance that this patient had an irreducible hernia, containing intestine, through which the calculus must have passed, and that during her illness the hernia was regarded as being the cause of obstruction, an operation not being performed merely for the reason that the patient would not submit to it.

In the twelfth volume of the "Med. Chir. Trans." Mr. Brague reports the case of a lady, aged sixty-five, who, after complete obstruction had existed for six days, was relieved by the passage of two calculi, the larger of which weighed 176 grs. The patient's symptoms were very severe, and at one time her situation was believed to be hopeless. Her recovery was ascribed to the action of purgatives—croton-oil (three drops), castor-oil, and colocynth being the principal medicines employed.

An extraordinary instance of recovery is related by Dr. Omond, and quoted by Thudichum in his treatise on gall-stones. The patient was a woman, aged forty, and complete obstruction existed for nearly four weeks, when some feculent matter was voided. At the end of five weeks a biliary calculus was passed, which measured three inches in circumference. Stercoraceous vomiting set in on the third day, and continued for three weeks. Purgatives were administered by the mouth and by rectal enemata.

Cases are also recorded in which recovery took place under the administration of opium and belladonna, which by many authorities are regarded as preferable to purgatives in the management of the affection now under consideration.

The only statistical account of this class of cases which I have found is that given by Duchaussoy,* who reports twenty cases of acute intestinal obstruction caused by gall-stones. Of this number, six, or nearly one-third, recovered. It may well be doubted whether this ratio of mortality will ever be reduced by laparo-enterotomy, when we consider the advanced age and the usually feeble health of those persons in whom the accident occurs, the concomitant lesions of the liver and intestine, the intensity of the symptoms, and the uncertainties of diagnosis. However this may be, it is evident that cases of this kind are by no means altogether hopeless, and that they are less dangerous than those of obstruction depending on many other causes. On the other hand, surgery has, unfortunately, no triumphs to record in dealing with these cases by laparotomy. I am able to refer only to one instance in which the operation has been done. In March, 1879, Mr. Bryant operated on a woman aged fifty, who had suffered during seventy-two hours previously with symptoms of complete intestinal obstruction, which Mr. Bryant believed to depend on volvulus, band, or intestinal hernia, the presence of a gall-stone not being suspected. But, upon opening the abdomen, a gall-stone measuring 1¾x1½ inch was discovered in the lower part of the ileum, about a foot from the cæcum. The intestine was opened, the calculus extracted, and the wound in the intestine closed by catgut sutures. The intestine was punctured, in order to allow it to be returned within the abdominal cavity. Death occurred eight hours after the operation, and at the autopsy there were found evidences of peritonitis, some degree of which was noticed at the time of operation. Mr. Bryant thought that the operation in this case was performed too late. This is, doubtless, true; but it seems equally certain that the operation determined and hastened the fatal event.

Notwithstanding the facts before us, however, I should without hesitation perform laparotomy and extract the calculus in any case in which a correct diagnosis could be made at an early period, and in which the size of the calculus was such as to render its expulsion through the natural outlet improbable. And, except in those rare instances in which the calculus can be detected by palpation of the anterior abdominal wall, I know of no means by which a diagnosis can be made, unless by manual exploration of the rectum. In the case I have reported, this method yielded, it is true, no important result, because the rectum was exceptionally narrow, and prevented the hand from making the usual excursions. But had I succeeded in passing this constricted point, I should unquestionably have discovered the foreign body, and been able to ascertain its size and position; for, at the autopsy, it was found in the hypogastrium, considerably below the level of the umbilicus, which can ordinarily be reached with entire safety by Simon's method of examination. In future I would be disposed to recommend an immediate resort to manual rectal exploration in cases of intestinal obstruction, because in the early stage of the disease, before the occurrence of abdominal distention, the examination would be much more likely to afford the desired information than when undertaken at a later period, and also because it might indicate the propriety of early operative interference, with the maximum chances of success.

The general question of the value of laparotomy as an expedient in the treatment of acute intestinal obstruction, is one much too wide for profitable discussion within the limits of the present paper; but I fear that the mortality of the operation (estimated by Leichtenstern at seventy per cent.) would be found to be much greater if the unsuccessful cases were duly recorded. In this matter I am compelled to confess my own delinquency, as out of three cases in which I have performed laparotomy for the relief of intestinal obstruction, I have published

* Congrès Médico-Chirurgical de France, 1re Session.

only a single case, which was successful. This, as is known to most of the members present, was a case of intussusception, occurring in an infant six months old, and treated by operation eighteen hours after the commencement of the disease. The two fatal cases may be briefly told as follows:

One was that of a man about forty years of age, upon whom I performed laparotomy in the Roosevelt Hospital, in February, 1876. Complete obstruction, with severe pain, had existed for six days, and no cause could be assigned for it. The abdomen was greatly distended, and vomiting was almost incessant, although at no time was it stercoraceous. The patient was in fair condition at the time of the operation. An extensive incision was required to reveal the cause of obstruction, which was found to be a twisting and displacement of the cæcum and colon, by which the mesentery and the small intestine were encircled and constricted by the mesocolon. The caput coli lay in the right hypochondrium. By making pressure on the distended intestines, I readily caused the escape of their contents per anum; and having thus reduced their volume, I was able to restore the parts to their normal position. Copious purging followed the operation, showing that the obstruction was relieved; but the patient died of shock six hours afterward. The autopsy proved that the obstruction had been occasioned simply by the malposition of the intestine already described.

The second case terminating fatally was that of a boy six and one-half months old, whom I saw in 1879, in consultation with Dr. Griswold, and on whom I operated for intussusception of forty-eight hours' duration. The child's condition was bad, but I operated because I was certain that the case would end fatally if left to itself. An incision three inches long enabled me to reach the intussusception, which was of the ileo-cæcal variety, and extended as far as the sigmoid flexure. Reduction was effected with some difficulty, and was accompanied with slight laceration of the intestinal peritoneum. The intestines were replaced without force, and the wound was readily closed with silver sutures. The child failed to rally, and died four hours after the operation.

These cases are the only ones in which I have performed laparotomy for intestinal obstruction. But I may properly cite a case which has never, so far as I am aware, been published, in which I advised and assisted at an operation performed a few years ago by a medical friend. The patient was a man about thirty years of age, who had suffered from acute obstruction for a week before the operation. No exact diagnosis could be made. When the abdomen was opened, the intestinal coils were found extensively adherent to one another, in consequence of former peritonitis; and a careful search failed to discover the nature or seat of the obstruction. The abdominal wound was closed, and the patient died soon afterward from exhaustion

The results of my experience, therefore, are not very encouraging; yet I am well assured that in my only successful case, death would have occurred without the aid of the knife. I am convinced that in many cases of intussusception the operation of laparotomy is an imperative duty, and that when performed early it will save lives that would otherwise be inevitably doomed.

I would also strongly urge the performance of the operation in certain cases of acute obstruction depending on the reduction of hernia *en masse;* on the presence of foreign bodies that cannot be otherwise removed; on constriction by bands; or even in cases in which the cause of obstruction is unknown, provided this seems to be invincible, and when life must otherwise be sacrificed. And I am confident that success will be commensurate with our ability to form an early diagnosis of the morbid state, so that the operation may be undertaken before the patient's vitality has been sensibly lowered by the progress of the disease. Laparotomy must always be our ideal in the operative treatment of this class of cases; and perhaps, at some future day, it may be realized.

But there is another class of cases in which our ignorance far exceeds our knowledge, namely, those in which the diagnosis goes no further than to establish the fact that obstruction exists. Now what should be our rule of conduct here? This is the point on which I would especially invite discussion. Is an *early* operation the preferable alternative? Is the danger of delay greater than that of interference? Shall we perform laparotomy as soon as we are sure that the obstruction is complete? This question is somewhat speculative. It is answered in the affirmative by some surgeons of sanguine disposition, and also by some ovariotomists, whose views are evidently biased, however, by their special field of observation. It seems hardly necessary to state that there is no parallel between ovariotomy cases and cases of intestinal obstruction. The points of resemblance are far less numerous than those of contrast; and it is idle to hope that the brilliant successes of ovariotomy will ever mark the performance of abdominal section for the relief of intestinal obstruction. I confess that I feel a great reluctance to entertain the proposal of immediate operation, however complete may be the obstruction, unless I can form a reasonable conjecture as to its cause. One reason for this feeling is the uncertainty attending the operation itself, many explorations having failed to discover the seat or the nature of the obstruction, as in one case I have already narrated. But my chief objection to immediate operation is based on the fact that the surgeon can never tell whether recovery is not possible without laparotomy. If the rule could be established that cases of this kind are as little likely to recover without surgical aid as are cases of strangulated hernia, the propriety of laparotomy might be strongly urged as increasing the patient's chances of life. But the truth is, that a considerable number of these obscure obstructions, even when severe in character, are overcome without resort to the knife, and sometimes without any treatment whatever. I may be allowed to cite the following cases in illustration:

About four years ago I saw a young gentleman in this city in consultation with Drs. Taylor, Clark, and Metcalfe. Four days previously he had been suddenly seized with abdominal pain, followed by nausea and vomiting. These symptoms, with absolute constipation and gradually increasing tympanites, continued up to the time of my visit. Vomiting occurred about every four hours, the matters vomited being thin and yellow, but not stercoraceous. Pain was moderate in severity and not localized. Rectal examination caused pain when the finger was pressed in the direction of the right iliac fossa, but no tumor could be discovered, nor anything else to indicate the seat of obstruction. Dr. Taylor had administered purgatives and enemata without effect, and had already commenced the ad-

ministration of opium. I punctured the distended intestine in three places with a hypodermic needle, through which there escaped a considerable quantity of gas, and a little liquid fæces. It was decided to keep the patient moderately under the influence of opium, to abstain from farther attempt to move the bowels, to apply fomentations to the abdomen, and to administer nourishment by means of rectal enemata. Two days later a small amount of wind and fæces passed per anum; and soon afterward copious fæcal evacuations occurred, with entire cessation of pain, abdominal distention, and other symptoms of obstruction. A week later the patient was convalescent.

I am aware that this case may probably have been one of peritonitis, but it had rather the characters of intestinal obstruction, and was so considered by all who saw it.

A second case came under my notice last autumn, in consultation with Dr. John A. Wyeth, of this city. A gentleman, sixty-nine years of age, while in full heath, and without any history of previous illness, was attacked with obstinate constipation, abdominal pain, and gradually increasing tympanites. There was tenderness, but no tumor, in the right iliac fossa. The vomiting was not stercoraceous. Cathartics had been administered without effect. Dr. Wyeth first saw the patient four days after the commencement of the disease. He administered morphia, and copious rectal enemata, nine pints of water being injected at one time. Five of these enemata were employed during a period of three days, and on the eighth day of his illness the bowels were freely moved and the patient became convalescent.

A third case I saw five years ago, at St. Luke's Hospital. A German, fifty-five years of age, was admitted on account of obstruction which had lasted for two days. The symptoms were pain in the lower part of the abdomen, constipation, and vomiting. The patient had suffered from an old inguinal hernia on the right side. He told us that the signs of obstruction came on the day after he had lifted a heavy weight. A puffy swelling, receiving a slight impulse on coughing, could be felt at the situation of the right external abdominal ring, which was patulous. There was moderate abdominal distention. Shortly after his admission, the patient was etherized and submitted by Dr. Sabine to a manual exploration of the rectum. No tumor or hernia could be felt, and the puffiness in the inguinal region was thought to be due to the presence of an empty hernial sac. Opium was administered, but the patient grew worse, and on the fifth day of the disease the vomiting was copious and decidedly stercoraceous. Relief by free fecal evacuations occurred on the tenth day. After this time he gradually improved, and was discharged from the hospital cured in a fortnight later.

The London *Lancet*, of January 3, 1880, contains an account of a case of obstruction in which the symptoms were very severe and of long duration, relief not being afforded until the thirty-ninth day. The patient was a lad, seventeen years of age, who was attacked suddenly with a sharp pain in the right iliac region, accompanied with vomiting and diarrhœa. On the day following, signs of obstruction were manifest, and the vomiting became stercoraceous. On the fourth day, the question of laparotomy was considered, and the operation rejected, the case being regarded as hopeless. Frequent stercoraceous vomiting continued during the next ten days, and the patient's death was momentarily expected. On the thirty-third day he passed per anum a small quantity of blood and mucus; and on the thirty-ninth day relief came, after the passage of what was estimated to be a quart of blood. Soon afterward fecal matter and pus were noticed in the discharges. He recovered slowly, but was reported to be in perfect health three months later. The principal medicine employed was Dover's powder. The case remained obscure to the last. Intussusception was suspected on account of the hemorrhagic evacuations, which, however, were carefully examined without discovering any intestinal tissue. It was conjectured that the obstruction had been occasioned by a blood-clot, the result of an intestinal hemorrhage.

A still more remarkable case is recorded by Dr. John G. Blake, in the *Boston Medical and Surgical Journal* of November 23, 1876. A man forty-six years of age, of excellent constitution, who had suffered from slight constipation and "biliousness" for some months previous to his illness, became obstinately constipated, and complained of soreness in the lower part of the abdomen. Purgatives were taken without inducing fecal evacuations. A careful examination at the time failed to reveal the cause or seat of the obstruction, which, however, was afterward thought to be in the small intestine. No movement of the bowels took place for eighteen weeks, at the end of which period the patient had hourly evacuations of a tarry looking matter, the quantity voided in twenty-four hours being estimated at a gallon. Diarrhœa afterward set in, and a week later death occurred from exhaustion. There was no autopsy. Hiccough and tympanites were prominent features of the disease, and the prolongation of life was ascribed to the free aspiration of the distended intestine, the instrument having been employed one hundred and fifty times while the case was in progress. Both gaseous and fluid contents of the intestine were withdrawn in large quantity. No peritonitis followed the numerous punctures.

It is needless to quote further cases. Similar examples may be found in large numbers scattered among medical periodicals, and in surgical treatises. How many might be collected I cannot say; but I imagine that the number would far exceed that of recoveries reported after laparotomy. They suffice to prove that spontaneous recovery is not, even in severe cases, so very infrequent; and I think they should make us cautious in recommending laparotomy at an early period, unless the indications for interference are tolerably clear. The pathology of these curious cases is quite obscure. Organic lesions probably exist in some instances, while in others spasm or paralysis of some part of the intestine has been imagined to afford an adequate explanation of the symptoms presented. That fatal obstructions of an acute character may be unattended by any appreciable material changes discoverable on post-mortem examination has been abundantly proved by the testimony of several writers on this subject.

In conclusion, I venture to submit the following questions to the members of the society:

First.—What is the result of their experience in the performance of laparotomy for the relief of acute intestinal obstruction?

Second.—What number of such cases have they known to terminate in recovery without operation?

Third.—Should laparotomy be performed at an early period in cases of acute obstruction, when no opinion can be formed respecting its character or situation?

ON THE TREATMENT OF SOME FORMS OF INTESTINAL OBSTRUCTION BY OPIUM.

By Professor GEORGE E. POST, M.D.,

SYRIAN PROTESTANT COLLEGE, BEIRÛT, SYRIA.

Intestinal obstruction may be divided into two kinds, *chronic* and *acute*. The *chronic* sort may be produced by the pressure of abdominal tumors causing difficulty in the passage of the intestinal contents, increasing with the growth of the tumors, as is often observed in ovarian, uterine, and mesenteric growths, as also in some spinal and pelvic abscesses, and in malpositions of the uterus. Or it may be caused by cancer of the gut itself, producing stricture which finally renders it impervious. Or it may result from inflammatory adhesions and bands which impede the natural peristaltic motions, or prevent the passage of scybala or even soft fæces.

Acute obstruction results from a number of causes: 1, Foreign indigestible bodies infarcted in any portion of the bowel; 2, internal strangulated hernia; 3, external strangulated hernia; 4, swelling of the ileocæcal valve to such an extent as to impede the passage of the fæces; 5, invagination of the ileum in the colon, or a part of the colon in another part; 6, spasmodic contraction. Each of these has its special mode of treatment.

1. *Foreign indigestible bodies.*—These are generally fecal masses which commonly collect in the descending colon and rectum, and may be best combated by drastic cathartics, injections, and breaking up the impacted fæces with the handle of a spoon or the finger.

2. *Internal strangulated hernia.*—The diagnosis of this state is a matter of extreme difficulty, but if made out, the treatment must be opening the abdomen and releasing the strangulated gut.

3. *External strangulated hernia.*—If the taxis should not prove sufficient, two courses of treatment are open to the surgeon: 1. If the symptoms are urgent, and the patient and his friends consent to the operation, herniotomy is the proper procedure; 2, in a considerable number of cases, however, the symptoms are moderate, *i.e.*, there is little or no vomiting, the pulse is but slightly or not at all accelerated, the temperature remains nearly or quite normal, or in the contrary case, the patient or his family do not consent to an operation. In such cases cathartics not infrequently aggravate the trouble by driving the contents of the intestines above the strangulation forcibly against the incarcerated portion, and causing irritation or inflammation in the contents of the sac, and sometimes extravasation of fæces into the peritoneum. In such cases opium given by the mouth or morphine hypodermically, combined with external emollients, frequently suffices to reduce the swelling and enable the surgeon safely to repeat the taxis and reduce the hernia, or, if irreducible, restore the permeability of the gut.

Case I.—Woman, aged seventy-five years. Irreducible femoral hernia of left side. Not being able to have a passage of the bowels, and having other symptoms of strangulation, she took a cathartic and used injections, with the result of aggravating the symptoms of strangulation. When the writer was called, he was not informed that the hernia had been irreducible for years. There was a swelling in the groin, of the size and shape of a cucumber, six inches long, of an angry red color, and very sensitive to the touch. The woman had vomited repeatedly. After moderate taxis, without any result, she was directed to take half a grain of opium every six hours, or oftener if necessary to control the pain, and to anoint the tumor and adjacent parts with belladonna ointment, and to apply flaxseed poultices over the tumor and the whole of the abdomen below the navel. This treatment was continued for three days, when the poultices were abandoned, and the lower part of the abdomen and the tumor were painted with collodion so as to form a thick investment. On the sixth day of the opium treatment she had five spontaneous movements, and on the seventh the swelling was soft, small in size, and little sensitive to the touch. All the symptoms of strangulation, except confinement of the bowels, passed away after the first few doses of opium.

A physician of Beirût informed the writer of a similar case, with a parallel result.

Case II.—Man, aged sixty-five years, corpulent, with large oblique inguinal hernia. The taxis produced no benefit, and as the symptoms were urgent a cutting operation was proposed. The family, however, utterly refused to permit the operation. He was then put upon the treatment above described, with the exception of the collodion. In this case fecal vomiting had occurred, and all the symptoms of strangulation were well pronounced. After seven days of the opium treatment the hernia was reduced spontaneously.

4. *Tumefaction of the ileocæcal valve.*—This condition sometimes causes quite sudden obstruction with pain and tenderness over the region of the valve, followed by distention of the small intestines and colic. In such cases cathartics usually do harm by propelling the intestinal contents against an impassable barrier. The opium treatment is the sheet anchor in this class of cases.

Case III.—Man, aged thirty-five years, was conscious of an obstruction which he was unable to attribute to any cause. He was treated by a physician, at first with cathartics in repeated doses and numerous injections, with no result except an alarming increase of pain and tenderness and swelling in the cæcal region. The same physician then ordered twenty leeches and flaxseed poultices, and told the patient that he had a cæcal abscess which must be opened. The writer, being called to perform this service, but not finding the symptoms of an abscess, but those of an ileocæcal obstruction, ordered six grains of Dover's powder to be taken at once, and after that three grains every three hours until the pain should have subsided, and thereafter when the colicky pain should return. This treatment was continued three days, with the use of large poultices over the right side of the abdomen, and on the third day he had a free passage of the bowels, after which all the symptoms disappeared.

Case IV.—Man, aged thirty years, was suddenly attacked with constipation and retention of urine. He took a powerful cathartic on his own responsibility, but vomited it up without any catharsis. He injected himself repeatedly with no effect, except to increase the colic and swelling, as even the water of the injection remained in the large intestines. After twelve hours from the onset of the symptoms the writer was called. At that time the countenance of the patient was anxious, his belly distended and tympanitic, his pulse 100 and temperature 102½ F. The swelling was greatest in the cæcal region, where there was also great tenderness on pressure. The urine was drawn with a catheter and twenty leeches applied to the tender spot, and belladonna ointment and poultices ordered over the lower and right side

of the abdomen. Three grains of Dover's powder were administered every three hours. The first dose was vomited, but after that the remedy was retained. The colicky pains began to subside from the first dose, and the belly became softer. Only nine grains of Dover's powder were taken during the first twenty-six hours. The second day the pulse was 96, the temperature 102° F., and the tenderness and tympanites diminished. He was directed to take the Dover's powder only when the pain was severe. He continued in this way to control the pain by the opiate for six days, during which he took in all about a drachm of Dover's powder. The pulse fell by degrees to 84, and the temperature to 100½°. During the sixth evening after the beginning of the treatment he had two copious and very offensive stools, and was by them entirely relieved of the tympanites, and of most of the tenderness and colic. The facial anxiety had quite disappeared. He was directed to take twenty drops of castor oil every two hours until he should have a free passage of the bowels. After a free motion from the oil during the night he was quite relieved of the remaining symptoms.

Case V.—The same individual had a similar attack some months later, without retention of urine, and recovered after the use of the same treatment as before, except that morphine was used instead of Dover's powder. The treatment was persevered in for a week before the bowels were moved. Other cases of a similar nature have been treated in a similar manner, and with equally good results.

In all of the above cases the diet was broth and milk alone until after there had been a free evacuation of the bowels.

It will be plain to the reader that the use of opium in all these cases rests upon the same basis, and has for its object keeping the irritated or congested or inflamed part still, until the irritation shall have subsided or the congestion or inflammation been subdued, after which the calibre of the bowel is restored, and natural peristalsis clears it of its contents.

A consideration of the dangers of strangulated hernia, and obstruction owing to swelling of the ileocæcal valve, shows us that they are not referable to the incarceration of the fæces several days, inasmuch as this condition obtains in some persons of constipated habit for ten days at a time. Moreover, the surgeon produces constipation by opium ten days or more after operations for vesico-vaginal fistula or recto-vaginal fistula, and the physician does the same in inflammation of the peritoneum. The real danger lies in the inflammation of the bowel or omentum, or their sloughing, or in inflammation of the peritoneum, owing to rupture of the bowel or bruising from taxis. In all these states, excepting gangrene, the opium treatment is valuable; and even in cases of gangrene it may do good by stopping peristalsis until the lymph effused around the gangrened part has attained consistency enough to prevent extravasation into the peritoneum.

5. *Invagination* of the ileum into the colon, or of a portion of the colon into the remainder. This state is a difficult one to diagnosticate, unless the invaginated gut is passed by the rectum or detected by the finger or the endoscope, or by abdominal section. In cases where this is suspected, I believe that the opium treatment is quite rational, having for its object and limit the subduing of the pain and arresting of peristalsis. The reasonableness of this treatment will appear from a contemplation of one of the natural cures for invagination, which is by sloughing of the intussuscepted part, and its passage per rectum. Nothing can be more obvious than the necessity of inducing a state of perfect rest of all the parts involved until the connection between the peritoneum above and below the invagination has been made secure by abundant deposit and sufficient organization of plastic lymph to prevent effusion into the cavity of the abdomen, and to lessen septic absorption. Beside all this, the opium allays the colic and diminishes the tenderness, symptoms the severity of which affords a fair indication of the gravity of each individual case. It need not be said that the opium treatment is one requiring the close supervision of the medical attendant, and his utmost vigilance, lest it should mask symptoms calling for an operation.

6. *Spasmodic colic* may resemble the foregoing states. It occurs generally in people of constipated habit, and, although calling for active cathartics, is well treated by a preliminary hypodermic injection of morphia over the seat of pain.

Case VI.—A man of constipated habit, who could hardly have a movement of the bowels without some medication, was attacked with severe pain in the right hypochondrium, in front of the angle of the ascending and transverse colon, accompanied with vomiting and severe general disturbance. In this case a hypodermic of one-third of a grain of morphine was injected over the seat of pain, as a preliminary to the use of a cathartic and injection. The same course was pursued in subsequent attacks, and always with the result of facilitating the relaxation of the spasm and the purgative action of the cathartic.

In all cases except the last it is best to administer opium by the mouth, owing to its action on the intestinal mucous membrane and muscular coat, as well as the peritoneum. In the case of spasmodic colic I prefer the antispasmodic effect of the subcutaneous injection, without the astringent and sedative effect on the mucous membrane produced by opium taken by the mouth, which interferes with the operation of a cathartic.

Lucas on Cross-legged Progression or Scissor-legged Deformity.—Two instances of this uncommon phenomenon, due to anchylosis of both hip-joints, are published by Mr. Lucas, of Guy's Hospital. The disease commenced at first in one hip, and had progressed to anchylosis before the other joint was fairly invaded. The patients were allowed to walk with the aid of crutches or sticks, bearing weight on the convalescent limb; gradually the limb that was last attacked was carried across the other. The patient in this cross-legged position walks from his knees, using them in place of his hips. The theory of the development of the malposition is given as follows: the patient when commencing to walk on the convalescent limb, finds that, by resting the other upon it, he can steady the one which is now inflamed, thus gaining relief from pain. At the same time, by the oblique position, the limb is shortened and rendered less liable to touch the ground. When he commences to walk with the aid of crutches, one knee resting upon the other supports it and leaves the legs free for the movements of locomotion. When the crutches are thrown aside the patient naturally finds himself in this cross-legged position.—*Reprint from Clinical Society's Transactions*, 1881.

Progress of Medical Science.

Baker on Vaginal Ovariotomy.—Dr. W. H. Baker, instructor in gynecology in Harvard University, in publishing the history of a case of vaginal ovariotomy that occurred in his experience, where the result was fatal, sums up his views substantially as follows: The success now attending ovariotomy by abdominal incision restricts the advantages of the operation to a very limited number of cases, and these should be where the cysts are small and their contents are bland, so that removal can be effected without difficulty and without great danger of septic peritonitis from the escape of any of the fluid into the peritoneal cavity; or in dermoid cysts so small as to be removed through the vaginal incisions without evacuation. On the other hand where ovarian cysts are firmly adherent in the pelvis, drainage into the vagina is recommended, the cyst being either destroyed by the cautery or allowed to suppurate and discharge itself through the line of incision.—*New York Medical Journal*, March, 1882.

A Frequent Cause of Death from Chloroform, and the best Protection against It.—The chloroform of the German pharmacopœia, which has a specific gravity of 1.495 to 1.496, readily undergoes, according to Dr. Theodore Clemens (*Allgemeine Medicinishe Central Zeitung*, January 4, 1882), a peculiar decomposition. Chloroform, thus altered, produces vertigo, emesis and, finally, syncope, which may be fatal. Chloroform made from chloral is not open to the above objection. Dr. C. states that the decomposition in question may be prevented by adding 0.5 per cent. of alcohol to the chloroform. The anæsthetic properties of the latter are not impaired by the alcohol. The mixture is said to be far more agreeable than pure chloroform, besides being more easily tolerated. The same author recommends the inhalation of pure alcohol as a powerful analeptic measure in various diseases.

Accidents Referable to Impure Chloroform—A Reagent for the Detection of Impurities, and a Method for their Removal.—Dr. J. Lucas Champonnière, editor-in-chief of the *Journal deMédicine*, states editorially in the February number (1882) of that publication, that impure chloroform is very generally encountered, even in reputable pharmacies and hospitals. The disagreeable results attending its administration are slow supervention of anæsthesia, dyspnœa, intermittent respiration, emesis, rigors, and even death. The impure chloroform is turned green by an alkaline solution of the permanganate of potassium, and the same reagent is the most reliable means for the purification of the anæsthetic. These facts have been verified and confirmed by a special committee of the Société de Pharmacie. All the unpleasant phenomena produced by the impure article are obviated by the use of chloroform purified by the permanganate of potassium.

Functional Torticollis Treated by Resection of the Spinal Accessory Nerve.—M. Tillaux reported a case of functional torticollis to the Paris Academy of Medicine, at a meeting held on January 30, 1882 (*Gazette des Hôpitaux*, February 2, 1882). The patient, a young woman thirty-two years of age, could retain her head in a normal position so long as it was supported from beneath. If, however, the head was left to itself it at once assumed the position characteristic of right-sided torticollis, without any appreciable muscular contractions. The sterno-cleido-mastoid muscle did not harden or shorten simultaneously with the occurrence of the distortion. The latter was attended with severe pain at the level of the first cervical vertebra on the left side. After electricity, magnets, metallotherapy, and section of the tendon of the sterno-cleido-mastoid had been employed, without resnlt, M. Tillaux performed resection of the spinal accessory nerve at its exit from the parotid gland. A portion of the nerve, three centimetres in length, was removed, and immediate union of the wound ensued. The patient was enabled, after the operation, to prevent the occurrence of the distortion, by an effort of the will. The inference that the displacement could not be invariably prevented by volitional effort seems justified by M. Tillaux's admission that the cure was not complete.

Treatment of Malignant Pustule by Hypodermic Injections of the Tincture of Iodine.—The *Archives Générales de Médicine* (February, 1882) publishes the history of a grave case of malignant pustule successfully treated at the Hospital Lariboisière by the subcutaneous injection of pure tincture of iodine. The patient was a butcher, thirty years of age. The wound from which, as a focus, the inflammation developed, was the prick of a thistle concealed in the wool of a sheep. The patient was admitted three days after the infliction of the wound, and presented a gangrenous spot one centimetre in diameter on the wrist, at the seat of the injury. Around the gangrenous focus there was a zone of vesicles, six centimetres in diameter. The entire arm was reddened and greatly swollen, the axillary glands were enlarged, and the side of the thorax œdematous. Three syringefuls of pure tincture of iodine were injected, hypodermically, at the outer limit of the vesicular zone. Lint, soaked in the tincture of iodine, was applied over the slough, and one gramme of the tincture, with twenty-five centigrammes of the iodide of potassium, were administered *per orem*. On the day following the operation the temperature had fallen from 39.5° C. to 37.2° C., the general condition had much improved, and the gangrene was arrested. The improvement was progressive and uninterrupted. The eschar produced by the injection separated after three weeks, and normal cicatrization ensued. Six cases of malignant pustule, successfully treated by the same method, are referred to in the same article.

A Case of Resection of the Stomach for Cancer.—This bold operation appears to have had its advocates in Russia, and Dr. Kitajewsky reports one with fatal issue in a woman fifty-two years old. She had been suffering continuously from vomiting and was in a pronounced cachetic state. The tumor occupied the pylorus, a large extent of the small curvature and a portion of the duodenum. The operation consisted in the removal of a part of the stomach, measuring 10 ctm. along the smaller curvature, and 9 ctm. along the greater curvature. Sixty-five sutures were used to bring the edges together. The operation lasted four hours with no unpleasant accident during its performance, excepting a transient failure of the heart and respiration. Five hours after the operation the pulse began to grow weak, respiration became frequent and shallow, and the patient died an hour later in collapse. The tumor weighed five ounces and six drachms.—*Meditz. Obozrenie*, xvi., p. 192.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, April 22, 1882.

FREEDOM IN CONSULTATIONS.

VARIOUS medical societies, jealous of their high estate in particular, and anxious for the honor of the profession in general, are manifesting in their own way a righteous indignation against the Medical Society of the State of New York for presuming to make its recent departure regarding free consultations. Several medical journals also are unsparing in their criticism of the course taken by the profession of New York, and are evidently rejoiced at the opportunity of showing how easy it is to fall from grace when the love of lucre takes possession of the soul. All this would be very bad for us if the charges were based on truth. But in all these tirades and protestations there has not been a sensible argument offered to prove why the step taken by the New York Society was a wrong one, not a single fact presented substantiating, even in the most indirect manner, any of the serious if not insulting charges against the committee of revision, and the mean insinuations against the Society itself. As a whole the attitude of the members of the State Society toward quackery in any and all its forms is now precisely what it has always been. There is no more danger of their aiding and abetting fraud than before the new code was adopted. Each man is as capable of judging what irregular practice is as before, and will decide accordingly. Nothing can be brought forward to prove that he is not as able and as willing to discriminate between good and bad as his self-appointed censors and his pretentious advisers. The mere granting of liberty of opinion and freedom of action to members can hardly be stigmatized as an unpardonable sin. If the American Code denies such freedom, it is time that the American Code was altered.

But in truth the provisions of the American Code can be as consistently followed by every New York man as by some of our immaculate brethren in other States, the only technical difference being in our case that the Society of the State, in a plain and straightforward manner, guarantees protection from petty discipline for every man who may wish to investigate truth in his own way. No one is expected, much less forced, to consult with incompetent practitioners and quacks. There is only one platform upon which all honest workers can meet, and that is a high, broad, and liberal one. None but the best men from any school can reach it in any event, and they possibly can be trusted to work out their own salvation. We think the profession of this State can afford to abide their time for a calm verdict on their course. It appears to be quite possible that some of our contemporaries who have so unsparingly denounced the new code are not the legitimate leaders of opinion even in their own districts. Already we are receiving from influential men in every part of the country the heartiest endorsements of the course of the RECORD in its advocacy of freedom in consultations, and already we are enjoying the proud distinction of being the only journal that has assumed the responsibility of being outspoken on this question. We are consequently more than ever emboldened to say that despite the adverse comments of medical journals, despite the denunciatory resolutions of State Societies, despite the anathemas of medical orators, the Medical Society of the State of New York is perfectly right in the stand it has taken, and that it must not back down in any particular. Several more State Societies are yet to be heard from through ambitious writers of resolutions, and some fatherly rebuke may still be expected from some of the presidents of these organizations. It is to be hoped that the New York men will receive it all with becoming grace, and, forgetting and forgiving, stand firmer than ever.

LAPAROTOMY FOR ACUTE INTESTINAL OBSTRUCTION.

FEW questions present more interest for the surgeon than those referring to the diagnosis and treatment of acute intestinal obstruction. It is fair to presume then that their discussion in the papers of Drs. Sands and G. E. Post, will command a widespread attention. To such as may study the cases presented and the remarks thereon, it must be quite apparent that the difficulties in the way of making an accurate diagnosis in any given case of acute intestinal obstruction are very great indeed, and even when the nature of the lesion is made out, the line of treatment is, in the generality of cases at least, by no means settled. There are, indeed, so many conditions to be taken into account before a diagnosis can be arrived at, and such an inconstancy in what may be considered the characteristic symptoms of a given lesion producing obstruction, that it is hardly surprising that almost every case is involved in more or less obscurity. This fact is strikingly manifested in the case reported by Dr. Sands, and

which forms the basis of his paper. Notwithstanding the most careful study of all the symptoms, the most thorough appreciation of their individual and collective bearing upon the probable cause of the obstruction, the patient died without a diagnosis being made as to the character or seat of the difficulty. Unfortunately, similar cases are quite too common to give much encouragement for a positive diagnosis in any given instance. Inasmuch as the question of treatment depends upon the accuracy with which the cause and seat of the obstruction are determined, the discussion of the expediency of laparotomy for that reason alone, is narrowed to very small limits. But this is not all. Laparotomy is a formidable operation. It is a last chance for the patient, and a very slim one at that. Paradoxical as it may seem, the cases which, on general principles, demand it the most urgently—for instance, those in which the attack is sudden and severe and the grave symptoms rapidly progressive, are most likely to die if the operation is performed. On the other hand, the cases of slower progress, but in which the prognosis would appear to be equally grave, not infrequently recover if let alone. Even when there is every reason to believe that the obstruction is due to internal strangulation, the latter sometimes frees itself in a very remarkable and unexpected manner, and the patient is restored to health. Taking into account the difficulties of making a positive diagnosis in a given case, and even in a particular instance of finding and relieving the obstruction when laparotomy is performed, and offsetting these against a not unreasonable chance of the patient finally recovering without any operation whatever, there is no great likelihood that laparotomy will be a very popular procedure. Indeed, until we can sufficiently perfect our means of diagnosis to determine the seat and character of the obstruction, and be able to decide early, with reasonable positiveness, that the obstruction cannot be overcome short of an operation, then it would appear to be the duty of the surgeon to advise laparotomy. But that we are far from being certain on any of these points is made very apparent by the rather exhaustive discussion of the subject in the present issue.

THE TREATMENT OF DIPHTHERIA IN THE PAST EIGHT YEARS.

Diphtheria has been of late one of the most written-up diseases in medicine. The diligent reader comes to regard the perennial flow of articles on the subject as a sad necessity of progress.

Dr. Ernest Kormann, of Coburg, has done a work which is better than original. It is a review of the literature concerning the treatment of diphtheria in the past eight years. The number of contributions to this branch of the subject alone is very large, being nearly one hundred and seventy. It may be a source of gratification to know that Americans were authors of about one-eighth of these articles. The English contributions numbered only nine, and the French about the same.

It would be impossible to give here any adequate summary of the many views expressed in these numerous papers, but some idea of their general tenor would be, we think, of interest.

There are articles by twenty-four authors on the prophylaxis of diphtheria. These recommend various measures, most of which are known. The most complete harmony is on the subject of isolation and cleanliness. The next most unanimous recommendation is as to the value of frequent gargling. The agents oftenest recommended are potassium chlorate and lime-water. But many recommend salicylic acid, potassium permanganate, astringents, myrrh, hot and cold water, carbolic acid, etc. Pencilling the throat with carbolic acid or other disinfectants is also advised. Internal medicines receive fewer recommendations except in the case of infants who cannot gargle. Potassium chlorate, salicylic acid, iron, quinine, alcohol, are among the agents enumerated as of use.

Upon the treatment of diphtheria proper there are one hundred and twenty-five contributions, with eighteen more upon the abortive treatment, making one hundred and forty-two in all. This represents a great deal of futile activity; but fortunately science is helped by failures as well as success.

A notable feature in the various contributions is that, no matter what the agent recommended, it is almost always an extremely efficient one. The literature of the therapeutics of diphtheria is essentially constructive. Indeed it is too much so, and some judicious iconoclasm would be very useful.

It is generally thought that when a disease has many drugs which are almost its specific, the real specific is nature. But Dr. Kormann suggests that this does not represent the whole truth for diphtheria. That disease may be in some cases or localities very favorably influenced by a special remedy which is of less value at other times or places. However this may be, it is certain that no heterogeneity of remedial measures recommended will justify a physician in adopting an expectant plan of treatment in the disease in question.

And indeed, the diversity in modes of treatment is not fundamentally at all great.

We find that two authors recommend flowers of sulphur blown into the throat. Thirty-eight authors recommend the use of some disinfectant as the essential thing.

Twelve give especial prominence to potassium chlorate; five to the salts of iron; thirteen to mercury; four to local applications of chloral hydrate; four to alcohol and other stimulants; ten to the volatile oils and balsams (turpentine, eucalyptol,

copaiva); twenty-six to pilocarpin; two to the application of digestive ferments.

There is the largest number of contributions, as well as the greatest weight of authority in favor of some form of antiseptic and roborant treatment.

The disinfectants recommended most are carbolic, salicylic, and boracic acids. Permanganate of potassium, bromine, chlorine water, ozone, are also mentioned.

But whether disinfectants are recommended or not, chlorate of potash is the agent oftentimes referred to in treatment. The tincture of iron, so extensively used in America, receives less notice among the German writers.

The use of pilocarpin is fully discussed. On the whole, it seems to be a failure. No one has gotten the result first claimed for it. It is not a specific, and several cases of collapse resulting apparently from its use are reported.

The cases illustrating the action of the mercury salts (cyanide, bichloride, etc.), are in some cases striking, but are too few for a satisfactory conclusion to be drawn regarding them. The methods of treatment by inhalation of oxygen, the use of digestive juices, fluoric acid, lime-juice, chloral, the balsams, etc., as yet have proved little for themselves.

The abortive methods of treatment consist in the careful and complete removal of the first sign of diphtheritic exudation; the very frequent spraying of the throat with weak solutions of salicylic acid, boracic acid, or of brandy. The inhalation of steam with gargles of hot water, the local application of strong astringents, or of caustics, and the use of very large doses of alcohol, all of these various measures received about equal commendation.

It is apparent from a study of the literature which we have here referred to, that diphtheria has no specific, nor is it likely to get one, until we find something which will cure all septic diseases. But, there has been progress made in the therapeutics of the disease, and an intelligent physician can save many lives by judicious treatment.

THE PATHOLOGICAL CHANGES IN DEATH BY HANGING.

Hanging at the present day is the most popular mode of committing suicide. Middle-aged men rather incline to firearms; women to drowning. But in the earlier and later periods of life suspension is most frequently employed.

This fact, as well as that of the increasing prevalence of suicide, makes the question of the medico-legal aspect of hanging an important one to the physician. He is liable to be called in order to decide whether a person who is found dead and suspended by the neck has done the act voluntarily or not.

This is by no means an easy matter in every case. Some fifty years ago, all France was excited by the question whether the Prince of Condé, who had been found dead and hanging by a handkerchief from his window, was murdered or had committed suicide. It is now generally admitted that there is no single post-mortem appearance which will surely indicate that the hanging was ante-mortem. The line of ecchymosis made by the cord is present in only a portion of cases. It is even possible to produce this ecchymosis immediately after death. The livid face, protruded or bitten tongue, the clenched hands, the ejected urine, fæces, or semen, the congested brain and lungs, all point to a violent death, suspension and strangulation, but do not surely prove it.

The local changes produced by the cord about the neck have been recently studied with great diligence by Dr. Adolf Lesser, of Berlin, and Professor Hoffmann, of Vienna. These investigators made no discovery of striking importance, but their examinations went to show that the lesions of the soft parts of the neck are, as a rule, somewhat more extensive than had been supposed.

The changes found in the tissue were very numerous. The outer mark on the skin was present in forty-five out of fifty cases, in the remaining five there being no lesions except of internal parts.

There were found fractures of the hyoid bone, but especially of its cornua. Also fractures of the thyroid and cricoid cartilages. It is these latter fractures, according to Hoffmann, which cause the loss of voice that often follows, after unsuccessful attempts at hanging. Slight extravasations of blood beneath the perichondrium, and in the mucous membrane of the larynx, in the muscular tissue, and even beneath the adventitia of the carotids were found. Rupture of the muscles, especially of the sterno-cleido-mastoid, is described as occurring, but is considered by Hoffmann to be caused by the post-mortem stiffening which shortens the stretched tissue. No description is given of any important lesions occurring in the vertebral column or spinal cord. It is quite well known that in suicides by hanging the vertebræ are rarely broken or dislocated, nor is the cord often pressed upon. Death is by asphyxia with perhaps in some cases cerebral hemorrhage. In executions, where the criminal is dropped a considerable distance, the vertebræ are sometimes injured.

The investigations just described, if they give no absolute sign of death by hanging, at least show that in alleged cases of suicide, a very careful examination of the neck should be made. The small extravasations that are shown to be so widely distributed point to ante-mortem violence.

RESIGNATION OF A FACULTY.

The resignation of several members of the post-graduate faculty of the Medical Department of the University of the City of New York has been announced. As usual, under such circumstances, the conclusion has been reached that there must have

been some general cause for dissatisfaction on the part of the gentlemen directly concerned in the movement. This is quite true. The significance of such an action, however, has, in many quarters, been somewhat overestimated. As not unfrequently happens, the discussion of the reasons for the course taken by the resignees has found its way into the columns of the daily press, and the public are being amused by statements pro and con concerning what is supposed to be a serious quarrel among the doctors.. This is to be deplored. The whole matter really narrows itself to a simple disagreement between the governing faculty and the members of the post-graduate corps of instructors as to the powers and privileges of each—nothing more and nothing less. The post-graduate faculty desired to have, reasonably enough, as it appears, a wider field for work, and proportionate increase of facilities to such an end, and the governing faculty considered that such claims militated against the general management of the undergraduate course, which to the faculty was certainly of paramount importance. In so far the faculty was right also, as it was impossible, in accordance with the general policy of the school, to dovetail the two systems into each other. When the issue finally was reached, and the question of what should and should not be came up to the surface of calm discussion, a radical difference of opinion between the two parties manifested itself. There was then nothing for the post-graduate faculty to do but to resign. We are not aware that there is any bad feeling on either side; neither are we sure that any extraordinary sensation has been created in the profession by the course pursued. We are quite confident that the resigning faculty did not contemplate any such thing; that they intended to settle in an easy and natural way what, at most, was a family difficulty, and that, having done so, they were left free to strike out modestly and quietly for a new and better field of usefulness. It is unnecessary to say that, from such a point of view, the profession generally will sympathize with them in their endeavors to advance the standard of medical education; at the same time it will condole with them on account of the unenviable notoriety which has seemingly attached itself to their new departure.

Homatropin in the Treatment of Phthisis.—Dr. Froumüller reports (*Memorabilien*) sixteen cases of phthisis with night-sweats in which homatropin was successfully used. The usual dose was .15 (gr. iiss.) in pill form, or .015 (gr. ¼) by injection. It was found that one injection would, as a rule, stop the night-sweats for several days. The fever and cough were also lessened, and the drug seemed to have the effect of bringing the disease to a standstill for a time. The advantage over atropin is that it (homatropin) produces its effects without any toxic symptoms, such as widening of the pupil, dryness of the throat, etc. The maximum dose is gr. ½ to gr. i. by injection.

Reports of Societies.

MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND.

Eighty-fourth Annual Session, held at Baltimore, Md., April 11—15, 1882.

(Special Report for The Medical Record.)

The Eighty-fourth Annual Session of the Medical and Chirurgical Faculty of the State of Maryland was held in Hopkins Hall, Johns Hopkins University, in the city of Baltimore, from April 11th to 15th, inclusive.

THE NEW YORK CODE.—PASTEUR'S DISCOVERIES.

The Faculty was called to order at 12 M., April 11th, by the President, Dr. Frank Donaldson, in the presence of about one hundred members and delegates.

He welcomed the delegates and members from the counties, referred to the deaths of Drs. Samuel P. Smith, of Cumberland; E. Lloyd Howard, and I. Davis Thomson, of Baltimore; to the favorable reception accorded the last year's volume of "Transactions," especially the papers relating to isolation of the mammalian heart and the blood-pressure in the coronary arteries; and suggested the creation of a section on biology and the offering of prizes for original investigations in experimental physiology and therapeutics. He predicted that a biological training would soon be considered an essential prerequisite to the study of medicine. After urging the importance of the library and its liberal support, he referred to the action of the New York State Society in the adoption of a code of ethics at variance with that of the American Medical Association. The outside public, who see no difference in what they call the several schools of medicine, consider the permission to hold consultations with irregular practitioners as the inauguration of a very liberal policy; but to the medical community "it appears irreconcilable with common sense and honesty. A moment's reflection ought to be sufficient to show that no intelligent consultation could be held between a scientific practitioner and the professed believers in the potency of infinitesimal nihilities, with Thomsonians, eclectics, or those professing to have discovered the elixir of life or panaceas for all diseases. In this State these men are all legally qualified to practice." He suggested that the Faculty reaffirm its adhesion to the Code of Ethics of the American Medical Association.

The President next referred to the International Medical Congress of London, and to the enthusiastic reception accorded to M. Pasteur, as illustrating the drift of medical thought in the direction of preventive medicine, dwelling at length upon the original researches conducted by this scientist, proving the connection of certain diseases with living organisms. Their starting-point was in the discovery of Cagniard de la Tour that yeast fermentation is due to the growth and development of a vegetable fungus, an idea ridiculed by Liebig and the chemists. This suggested that putrefactive and other kinds of decomposition might be dne not to the action of oxygen upon unstable organic compounds, but to a new arrangement of elements, brought about by the development of germinal particles deposited by the atmosphere. Lister first applied this idea to the treatment of disease by seeking to exclude germs from wounds. The great lesson that we learn from

Listerism is the value of scrupulous cleanliness and purity of the air. The discovery of the nature of the contagium of pebrine, the silk-worm disease, and of charbon—a fearful epidemic which, in the province of Novgorod, Russia, alone, in three years, destroyed 528 human lives and 56,000 of those of horses, cattle, and sheep—were successively described. It was stated that the blood of animals dead from charbon might be dried and kept for years, and even pulverized into dust without losing its power of infection. The wool-sorter's disease was believed to be a modification of charbon. The possibility of the communication of zymotic diseases to man, who lives upon vegetables and herbivorus animals, from the soil, through the agency of earthworms, was suggested. The changes effected by culture in germs, analogous to those produced by cultivation in esculent plants and fruits, was a most important observation, and has led to the protective vaccination against two diseases—charbon and chicken-cholera—by the use of a mitigated virus. The possibility of the conversion of harmless into virulent micrococci by mal-sanitary influences, as foul air, darkness, high temperature, filth, etc., may explain the occurrence of malignant cases of infectious diseases, since all these conditions are known to be favorable to the growth of vegetable fungi. Tyndal's observations in the Alps proved the absence of germs in the atmosphere of elevated localities, and the author had acted for years past on the belief that the arrest of progressive lung suppuration in consumptives resorting to the high altitudes was to be attributed to this fact.

The power of the protection afforded by the new vaccination has been shown by Greenfield, Toussaint, and Pasteur, but most strikingly by the experimentum crucis of the last in the inoculation of fifty sheep, twenty-five of which died, according to prediction, on the following day. Recent researches point strongly to the dependence of malaria, phthisis, and scrofula upon the presence of germs, the inoculation of which is capable of producing these diseases, but much is yet needed to establish the power of vaccination in the case of other diseases than those above mentioned. The germs must first be isolated and mitigated by cultivation. The light thrown upon the protective power of Jennerian vaccination by these researches was then pointed out. The vaccine virus, by passing through the human body, loses its original potency, the effect diminishing in direct proportion to the number of cultivations. Martin, of Massachusetts, states that the humanized virus never communicates vaccinia to the heifer beyond the third remove, whilst there is no difficulty in keeping up a continuous transmission of vaccinia by the successive inoculation from heifer to heifer. The practical deductions from these facts are obvious. To the use of this virus, as furnished by the State vaccine agent, Dr. Regester, was attributed the efficient checking of the small-pox in this community. By the use of the bovine lymph the Jennerian vaccinia is produced in all its original efficacy without any deterioration of its protective influence by prolonged humanization.

REPORTS OF OFFICERS AND COMMITTEES.

The Corresponding Secretary, Dr. Michael, read letters of acceptance of honorary membership from Professors Goodell, of Philadelphia, and Mallet, of University of Virginia.

The Treasurer, Dr. Gilman, made his report for the past year. The membership had been diminished by 13—7 dead, 5 withdrawn, 1 dropped for non-payment of dues; the accessions had been 28—26 active and 2 honorary members. The total receipts were $2,243.40; total disbursements, $1,696.57, leaving a balance on hand of $546.85. The assets were $7,823 (including library valued at $7,000); liabilities, $187.50.

The report of the Committee on the Library was presented by its chairman, Dr. I. Edmondson Atkinson. The report showed an increase in the value of the library of $1,000. Three hundred and twenty-five volumes had been received during the year, making the present number 3,069. Number of journals regularly received, 118; of transactions, 49. Total receipts for the use of the committee, $493. Numerous donations of books, pictures, journals, etc., were acknowledged, the most interesting being the minutes of the Harford County Medical Society (1797), a letter from Professor William Cullen (1773) to Dr. Upton Scot, the first President of the Faculty, some of the early lecture tickets, notes of lectures, ledgers, etc., chiefly from the library of John Archer, M.B., a distinguished physician of Maryland during the last century.

The Committee on Publication reported through Dr. Regester that 500 copies of the last year's transactions, and 700 copies of Professor Goodell's address on "The Dangers and Duty of the Hour" had been published and distributed at a cost of $462.80.

Dr. Kemp, of the Committee on Memoirs, read sketches of the lives of Drs. J. M. Sullivan, J. W. Walls, I. D. Thomson, T. C. Maddux, and Beniah Titcomb.

Dr. Latimer also read a sketch of Dr. E. Lloyd Howard, and

Dr. Christopher Johnston, Jr., one of Dr. Samuel P. Smith, of Cumberland.

The Curator, Dr. Bowie, presented a report urging the need of better accommodations for the pathological specimens belonging to the Faculty.

SECTION ON SURGERY.

The report was made by the chairman, Dr. L. McLane Tiffany. He first presented a patient upon whom he had successfully performed

AMPUTATION AT THE LEFT HIP-JOINT,

last November, on account of a small-celled sarcoma of eighteen months' duration. The bone suddenly gave way, establishing the diagnosis. The tumor was eight inches in diameter. The patient, a young man aged twenty, goes about on crutches. An abscess formed about six weeks after the operation, which continues to weep at the present time. The stump looks well, and the cause of the discharge was not known.

Dr. Tiffany then read a paper on

TREATMENT OF CANCER OF THE RECTUM BY EXCISION, WITH REPORT OF A CASE OF EXCISION.

He described the general characters of the disease, and pointed out the importance of their early recognition. In his experience cases were generally allowed to progress beyond the possibility of relief from operation before they came to the surgeon. He endorsed in a general way the rules laid down by Volkmann regarding the selection of cases for excision, and enforced the well-established rule not to operate in cases where the upper limit of the growth was beyond the reach of the tip of the finger.

The following case of excision was then related:

L. R——, female, aged forty-seven, single, had a tumor removed from the sacrum three years ago. A year ago she began to have discomfort about the anus. She came under Dr. T.'s care in February, with bloody discharge, bearing down, during defecation severe pain. A saddle-shaped epithelioma was found, the seat resting against the rectum, the flaps encircling the bowel, but not quite meeting in front at the median line. The growth was movable upon the subjacent tissue. There were no glandular enlargements, and general health was excellent. The growth involved the lower three inches nearly of the rectum behind, and one and one-half inches in front. Excision was performed at University Hospital, February 27, 1882, by the incisions mentioned above. Both finger and knife were used to free the bowel from adhesions. The bowel was divided with the Paquelin cautery above the growth, and the edges stitched to the skin, except behind, where this was impossible without excessive traction. The perineum was split backward to the coccyx to facilitate drainage. Frequent irrigation with warm carbolized water and general cleanliness constituted the after-treatment. On the third day temperature was 103°; on the sixth it was normal. The patient will leave for home this week, being able to retain her fæces unless very fluid.

Should excision be impracticable, pain and obstruction demand attention. A soft evacuation should be secured daily. Bougies were condemned, and large injections only become necessary for the removal of hard masses. Iodoform suppositories afford relief, and opium should be used freely. Spasm and irritability are relieved by incision of the sphincter and rectum back to the coccyx. Sooner or latter colotomy becomes applicable, on account of obstruction and the extreme suffering from the passage of fecal matter over the ulcerated surface. This operation the author had performed three times. Two of his patients had died some time subsequent to the operation, the third was still living, over a month having elapsed since the colotomy. This patient is a man aged sixty, who came under care with an epithelioma of the anterior wall of the rectum, three inches in diameter and adherent. The finger could not reach its upper extremity, and excision was contra-indicated. Six months elapsed before the obstruction became complete. Colotomy was done March 9th. No complications occurred, and the wound healed well and rapidly. When distended the colon is found without difficulty, but if empty, the kidney, which can always be felt through the subperitoneal fat, is the best guide, the colon resting on the anterior surface of the lower end of this organ. An oakum pad and snugly fitting bandage are sufficient to retain the fæces after the operation.

Dr. G. Halsted Boyland read a supplementary report on two cases of

FRACTURE OF THE INFERIOR EXTREMITY OF THE RADIUS,

both in males—aged twenty-four and fifty-five—both on the left side and from falls on the palm. The first only was accompanied by deformity, which did not disappear entirely under treatment. The plaster-of-Paris bandage was used in both cases.

The first day's session then adjourned.

The *second day's* session opened with the reading of papers exhibiting the results of researches made in the Biological Laboratory of the Johns Hopkins University. The first was by Mr. Wm. H. Howell, A.B., and Frank Donaldson, Jr., A.B.,

ON THE FORM OF THE PULSE AND ON THE MEAN ARTERIAL PRESSURE IN A DOG WITH PERMANENTLY OPEN DUCTUS ARTERIOSUS.

A dog came under observation presenting symptoms of cardiac disease. Auscultation revealed hypertrophy, and a loud rasping systolic murmur, most intense at the base, with a slight murmur, coincident with the second sound. Tracings were made with Marey's sphygmograph on the femoral artery. The femoral arteries were then laid bare, and a canula introduced into each one, being connected with an ordinary mercury manometer, the other with a Fick's federkymographion. These tracings were all normal, showing that the heart lesions and disturbed circulation did not produce any alteration in the pulse wave or arterial pressure, as might have been inferred from the conditions found on post-mortem, which were as follows: patent ductus arteriosus, allowing free communication between the pulmonary artery and aorta; considerable dilatation of the commencement of the arch, but without atheromatous change; enlargement of the heart with hypertrophy of the left ventricle and apparent insufficiency of the mitral and pulmonary valves; a small valvular fold at the entrance of the ductus into the aorta prevented the passage of the blood, forced from the left ventricle into the pulmonary artery, but offering no resistence to its entrance on the recoil of the aorta. The free communication of the systemic and pulmonary system would have led to the expectation of a diminished pressure, the absence of which was probably due to increased force of the heart or increased peripheral resistance.

The second paper was read by Dr. Henry Sewell, Associate in Biology, and Frank Donaldson, Jr., A.B., and entitled

OBSERVATIONS ON THE INFLUENCE OF VARIATIONS OF INTRA-CARDIAC PRESSURE UPON THE CARDIO-INHIBITORY INFLUENCE OF THE PNEUMOGASTRIC NERVES.

The experiments which it is intended to repeat upon the isolated mammalian heart were done principally upon the frog and terrapin. The following were their results: (1) increase of intra cardiac pressure by raising venous pressure diminishes the inhibitory power of the vagus; (2) variation of arterial pressure has no effect on vagus efficiency; (3) with a canula passed through the semilunar valves into the left ventricle, increased arterial pressure had no effect on the vagus until blood had made its way backward through the auriculo-ventricular valves into the auricles, and thus raising the pressure within them, indicating that insufficiency of the semilunar valves has no influence on vagus inhibition, and the peculiar effect of increase of intra-cardiac pressure on the vagus action can only exert itself during the heart's diastole; (4) the ventricle being excluded, variations of pressure within the sinus and auricles together was quickly manifested in the diminished efficiency of the vagus; (5) increase of sinus pressure alone lessens the efficiency of the vagus. "We have then confirmed," say the authors, "on the frog and terrapin that variation of intra-cardiac pressure has a very marked effect in modifying the intensity with which the cardio-inhibitory fibres of the vagus act on the heart. It has been shown that increase of systolic pressure in the ventricle is not the cause of this influence on the vagus action. It has been made probable that the result is not due to increase of systolic pressure within the auricle and therefore that the whole heart is affected in this respect by variation of intra-cardiac

pressure only during its diastole. We have found that increase of pressure within the ventricle at its diastole, such as would follow from semilunar insufficiency, has of itself probably no effect on the vagus action. We have shown that all the effects which variation of intra-cardiac pressure have upon the efficiency of the vagus, can be produced on the auricles and sinus together or upon the venous sinus taken alone."

The third paper was by H. H. Donaldson, A.B., Fellow of J. H. U., and M. Warfield.

ON THE VARIATION IN THE WORK OF THE HEART UNDER DIGITALINE.

The preparation employed was that made by Merck, of Darmstadt, and the slider terrapin was employed in making the experiments. Is the rise of pressure observed after the use of this agent due to the arterioles or to the increased work of the heart? Most authorities concur in the former belief, but in 1872, Boehm claimed an increased heart-work from moderate doses—.0005 grm. to .001 grm., basing his conclusions upon a series of experiments made upon the isolated frog's heart, and upon his failure to discover constriction of the arterioles. The method of feeding the isolated mammal heart, perfected by Professor Martin, enabled Mr. Donaldson to run digitalinized blood through the heart, without otherwise changing the animal's condition. The venous and arterial pressures were always within normal limits. The dose employed varied from .0003 grm. to .005 grm. in 100 c. c. of blood. The heart was dosed, and recovered from four to six times in each experiment, and the experiments lasted from five to ten hours. Forty cases were recorded. Eight of these were rejected on account of imperfections. The remaining thirty-two led to the following conclusions: That the work done was always decreased by digitaline, the amount of decrease bearing a rough proportion to the size of the dose; that with small doses there was an initial quickening of the pulse; that it was the percentage of the agent, not the absolute quantity, that was the important fact in varying the heart. The main conclusion is supported by all the experiments so far made on mammals. The inference, therefore, was that the work of the human heart is decreased by digitaline, not increased, as some have maintained.

ELECTION OF MEMBERS.

The Faculty then took up the names of the thirteen candidates recommended by the Board of Examiners for the Western Shore for membership. Among these were Dr. Whitfield Winsey, a colored practitioner of Baltimore, and a graduate of Harvard University, whose recent rejection by the Baltimore Medical and Surgical Society attracted much unfavorable comment and criticism. In this case, however, his election was accomplished without the least sign of opposition, and the reporter may add that the number of these members of the profession in Baltimore who object to the election into our medical societies of a man otherwise qualified, simply on account of his color, is extremely small, nor do they all, by any means, hail from the South.

INCREASE OF MEMBERSHIP DUES.

The amendment to the constitution increasing the annual dues of members residing in Baltimore to $8, of which $4 shall go to the expenses of the Library, and also appropriating $2 of the $3 already required from country members to the same object, was then voted upon and adopted, after which a motion to adjourn prevailed.

The *third day's* session opened with the

ANNUAL ORATION,

delivered at noon, April 13th, by Dr. A. M. Fauntleroy, of Virginia, his subject being

THE RECIPROCAL ACTION OF MORBID BODILY AND MENTAL INFLUENCES.

The importance of psychology could not be ignored by the general practitioner. The union of mind and body is intimate, but of the mode in which it is effected we are in profound ignorance, and probably always will be. We recognize in the organism a mental force associated with, yet superior to the vito-physical energies. The nervous system is the physical condition of psychical phenomena. The nerve-centres are acted upon ascensively by bodily conditions, whilst on the other hand, are themselves influenced by such conditions, functional and organic, ascensively. Gout, epilepsy, consumption, gastro-hepatic derangements, chorea, and above all hysteria, exhibit promptly the close relationship of mental and bodily states. Insanity in its causation and phenomena exhibits constant instances of the interdependence of physical and moral influences. When we consider that the air is full (so to speak) of germs—political, commercial, religious—capable of infecting the mind and destroying its balance, the frequent inheritance of a predisposition to insanity from preceding generations, which may be excited to activity by the slightest cause, and the delicacy and complexity of the brain itself and its intimate connection with the entire organism, our only surprise should be at the infrequency of insanity. The address was comparatively brief, and being upon a purely technical subject, its merits cannot be fully appreciated until it is read. Upon its conclusion, a vote of thanks was passed, and Dr. Fauntleroy was elected an honorary member of the Faculty.

SECTION ON PRACTICE OF MEDICINE.

The report was read by Dr. Thomas B. Evans, Chairman. It was entirely devoted to the causation of disease, particularly with reference to the recent researches into the nature of germs by Pasteur and others, and went over pretty much the same ground embraced by the President's address. One point upon which the author insisted was the presumptive proof afforded by these researches of the identity of vaccinia with variola.

SECTION ON OBSTETRICS AND GYNECOLOGY.

The report was made by Dr. Thomas Opie, Chairman. It was principally a review of the work done during the year in the section. Realizing the need in Baltimore of an association of the physicians especially interested in these departments the section had held monthly meetings, which had been well attended and the proceedings of which had been of very great interest. The chairman hoped that the need of an obstetrical society in Baltimore (already supplied in most of the larger American cities) would be obviated by the permanent continuance and increasing activity of this section, which was capable of supplying all the wants of specialists in this field without the additional expense of a new society, of which there were already enough in Baltimore. Among the most interesting matters coming before the section had been the report of a case of extra-uterine pregnancy presenting unusual and difficult points in diagnosis, by Dr. Thos. A. Ashby; papers upon the uses of the forceps, by the same

gentleman and Dr. John Morris; a paper on the use of electricity in the treatment of amenorrhœa, by Dr. A. Bernard Browne; cases of ovariotomy during pregnancy and of combined intra-uterine and abdominal twin pregnancy, by Dr. H. P. C. Wilson; a case of extra-uterine pregnancy with ulceration through the abdominal wall, by Dr. A. F. Erich, and a paper on ergot by Dr. P. C. Williams. Several of these have already been published in the journals, and the others will soon appear. Dr. Williams holds the following views in regard to the use of ergot. He believes that it will prevent abortion before the fourth month, that it will shorten labor and obviate exhaustion in the woman, that it will prevent diminution of the pains from chloroform, that it will prevent post-partum hemorrhage and septic absorption. Of 158 cases of labor treated upon the plan of shortening its duration, and relieving pain by the employment of ergot and chloroform, and of forceps whenever there is unusual delay, he had lost no mothers and but three children. He believes that erzot is useless in labor except by hypodermic injection, and prefers the finid extract to ergotine for this purpose. Dr. Opie concluded his report by the relation of some case of ante-mortem heart-clot, the specimens of which were exhibited, and by a history of six cases of septicæmia observed at the Maternité Hospital, and gave his conclusions that: (1) an atmospheric miasm was concerned in the etiology of puerperal fever; (2) that there was strong ground for a belief in the close relationship of erysipelas and septicæmia; (3) that many cases of sudden death imputed to heart-clot may be imputed to septicæmia.

SECTION ON MATERIA-MEDICA AND CHEMISTRY.—UNIFORMITY IN FLUID MIXTURES.

The report was made by Dr. John R. Uhler, Chairman. It alluded to several drugs, new or having new applications. The most important suggestion in the report was that of a preparation of all drugs capable of being dispensed in a liquid form the same bulk of which, say one drachm, would represent the adult dose of every such drug. The author claimed that this would much simplify the work of both physician and druggist, would render the labor of memorizing less exacting upon the part of the former, and would enable him at any moment to employ any one of a great variety of drugs, thus increasing his usefulness and his power to cope with disease.

SECTION ON SANITARY SCIENCE.

The report opened with a paper by the chairman, Dr. John Morris, upon the causes of the prevalence of diphtheria in the Seventeenth Ward of Baltimore City. The number of deaths in this ward in 1881, from diphtheria alone (as reported by the City Health Department), was 140, the whole number in the city being 630. The author claimed that this disproportionate mortality in the ward named was due to the excessively offensive odors arising from dead fish and other animal matter employed in the fertilizing manufactories. The stench is so offensive that the residents are compelled to keep their doors and windows closed during the summer months, and they have been forced to seek relief in the courts. The author claimed that filth in the air was as noxious as that in water. Diphtheria is due to decomposing animal matter, under whatever form, and dampness cannot alone generate the virus.

The session then adjourned, and many members embraced an invitation to witness the beating of an isolated dog's heart in the laboratory overhead. The animal had been dead about three hours at that time, and his limbs had already begun to stiffen. In the evening a reception was given by the President of the Faculty at his residence on Park Avenue, which was attended by a large number of members and delegates.

The *fourth day's* session opened at noon with the reading of a paper by Prof. H. Newell Martin, M.D., D.Sc., M.A., of Johns Hopkins University, upon

THE INFLUENCE OF VARIATIONS OF ARTERIAL PRESSURE, OF VENOUS PRESSURE, AND OF TEMPERATURE UPON THE PULSE-RATE OF THE ISOLATED MAMMALIAN HEART.

The author stated that he had much improved the method of isolating the dog's heart from all the rest of its body except the lungs, since his communication upon the subject to the Faculty a year ago. As now practised it consists in anæsthetizing the animal and tracheotomizing it; the carotids are then exposed, ligated, a canula placed in the cardiac end of each, artificial respiration is started, the thorax opened and both subclavians tied. A wide canula is inserted into the aorta just beyond its arch. The coronary arteries are the only systemic arteries that now remain open, and brain, trunk, and limbs commence to die. Next the inferior cava is ligated just above the diaphragm, the vena azygos near its junction with the superior cava, and the latter below the point where the left innominate joins it. All the systemic veins except the coronary are now closed—the pulmonary circulation remains intact. Heart and lungs are now alone the seat of circulation. A large canula is tied into the cardiac stump of the superior cava and connected with a reservoir of defibrinated blood. The carotid canulas are opened and the blood washed out of the heart and lungs and replaced with defibrinated blood from the reservoir, and during this process a thermometer is tied into the left subclavian, which gives subsequently the temperature of the aortic and coronary blood. The animal is then placed in a warm moist chamber at a temp. of 38°C. The canula in the superior cava is connected with a Marriott's flask filled with defibrinated blood with which the heart is fed. The aortic canula is attached to a rubber tube whose distal end can be raised or lowered at will, clamps are now removed, the blood from the flask enters the heart at a known pressure and is thence pumped out into the aortic tube; this latter pours it into a funnel from which it is conducted to an empty Marriott's flask. As one flask empties the other fills, and at any time, by means of stopcocks, the empty one can be disconnected with the heart, and the other full one used for heart nutrition. Uniform artificial respiration is maintained by a small water engine. The carotid canulas are connected with manometers which record pulse-rate and arterial pressure on the paper of a kymograph.

Under these conditions we can raise arterial pressure by elevating the aortic tube; we can raise venous pressure by elevating the supplying flask; we can warm or cool the blood, whose temperature is registered by the thermometer in the aorta. The details of the experiments performed upon the mammal heart by such a mechanism cannot be entered into here, but they proved conclusively, according to Professor Martin, that arterial pressure (varied from one less than the normal to nearly double the normal) had no direct effect whatever upon the rate

of beat of the heart; that changes in the venous pressure (varying from that exerted by a column of defibrinated blood 7 ctm. in height to that of one 38 ctm. in height) had no direct influence on the rate of the heart-beat; that increase in the temperature of the blood increases in direct proportion the frequency of the mammalian heart-beat. The practical results to medicine from the *demonstration* of the last conclusion were pointed out. The originality, ingenuity, and great value of Professor Martin's researches excited profound interest, and his communication was received with the greatest applause. Honorary membership would have been conferred on him had not the constitution prohibited it to residents of the State.

The report was continued by the reading of a paper by Dr. William M. Kemp,

A REVIEW OF THE ACTION OF THE BOARD OF HEALTH OF BALTIMORE IN REFERENCE TO THE YELLOW FEVER EPIDEMIC IN PORTSMOUTH AND NORFOLK IN 1855.

Dr. K. was at that time Health Officer of Baltimore, visited the infected cities early in the endemic, and investigated thoroughly the circumstances connected with its outbreak. His conclusions were that it was of local origin and non-contagious. He pointed out with great emphasis that no better evidence of the non-communicability of the disease could be obtained than during this endemic, when the freest communication was permitted between the infected ports and Baltimore, and yet not a single case appeared in the latter city except among refugees.

The third paper from this section was by Dr. W. Chew Van Bibber, and was upon the

DRINKING WATER OF MARYLAND.

Much valuable local information was given in this paper. He suggested that examination of the drinking water might throw light upon the etiology of malaria. The percolation of sea-water through the soil was a possible source and would seem to correspond with its limitation to the tide-water region. The extent of the tide-water coast of Maryland was reputed to be 2,815 miles. The water-supply of Baltimore obtained from the Gunpowder River and Jones' Falls was stated to be 500 gallons to each individual in twenty-four hours, and it was believed "that Baltimore has now the largest proportionate water supply of any known city."

The report of the *Sections on Anatomy, Physiology, and Pathology*, and on *Psychology and Medical Jurisprudence* were presented by Dr. Randolph Winslow and J. S. Conrad, read by title and referred to the publication committee. The titles were "Anomalies of the Osseous and Ligamentous Systems," and "Associated Physiological and Pathological Psychology of the Insane."

There was no report from the *Section on Microscopy, Micro-Chemistry, and Spectral Analysis.*

SECTION ON OPHTHALMOLOGY AND OTOLOGY.

The report was read by Dr. J. J. Chisolm, Chairman. The subjects treated were Eserine, which has taken the place of all other remedies in corneal affections; Pilocarpin, which had produced the best results in the author's hands, internally used, of all the articles in the pharmacopœia in acute inflammations of the eyeball; Salicylate of Sodium of the greatest value in iritic and scleral inflammations, whether specific or rheumatic; Homatropin to be preferred to atropia and duboisia on account of its transient mydriatic effect; Color-Blindness; Myopia in School-children; Antiseptic Eye Surgery, nerve-stretching in Ophthalmic Practice; Skin-Grafting in the same, and Optico-Ciliary Neurotomy, an Operation by which the author has obtained many excellent and permanent results.

He laid down the following aphorisms for general practitioners practising ophthalmology.

1. Do not blister.
2. Do not use nitrate of silver.
3. Do not use acetate of lead.
4. Treat affections of the mucous surface by weak astringents—borax, sulph. zinc, tannin—and cleanliness.
5. Use weak solutions of eserine for corneal affections.
6. Atropia solutions are essential to break up recent iritic adhesions.
7. When in doubt, consult early with a specialist.

The session then closed.

The fifth and last day's session opened at 12 M. Volunteer papers being in order, Dr. John N. MacKenzie read one on

DIPHTHERITIC ULCERATION OF THE AIR-PASSAGES, AND ITS RELATION TO PULMONARY PHTHISIS.

Are all forms of ulceration of the upper air-passages associated with pulmonary consumption, due to the tubercular diathesis or accidental accompaniments of the latter? The author studied a variety of ulceration which, in view of its histological characters, he regarded as of diphtheritic nature. The erosions referred to are at first superficial, afterward growing deeper, are multiple, most abundant in the lower trachea and bronchi, never found except in phthisical patients. Histological examination showed typical characteristics of diphtheritic inflammation. Distinct miliary tubercles were nowhere to be seen. The author attributed these ulcerations to the corrosive action of the foul contents of the pulmonary caverns lingering in the bronchi and lower trachea. The proofs of this mode of origin are: (1) the predilection of the ulcers for those places which are in constant contact with the sputa; (2) their increase as the lungs are approached; (3) they can be traced from the bifurcation of the trachea into the tube which leads to a cavity; (4) their absence, except in cases of lung cavities or advanced phthisical disease; (5) their occasional presence in the œsophagus, intestines, and stomach, from swallowing of sputa; (6) their occasional presence in suppurative pneumonia and gangrene. "These lesions may, therefore, be regarded as the result of an inoculation, so to speak, of the mucous membrane with the detritus from the broken-down pulmonary tissue, leading to the formation of a loss of substance pathologically distinct from, but possessing some of the external characteristics of the tubercular ulcer."

The next paper was by Dr. William Lee, and upon

RECURRENT HEADACHES IN CHILDREN.

The author drew attention briefly to certain facial and muscular peculiarities characterizing these cases.

The next paper, by Dr. I. Edmondson Atkinson, on

SIMPLE CHANCRE OF THE PREPUTIAL MARGIN,

was read by title and referred.

MISCELLANEOUS.

The rest of the session was devoted to reports of special committees, to miscellaneous and unfinished

business. Amongst these were many subjects of very great importance, especially the report of the Library Building Committee, all of which were postponed until a special meeting to be held May 2d, which will therefore be the complement of this meeting.

ELECTION OF OFFICERS.

The election of officers was then held, resulting as follows: *President*, Dr. William M. Kemp; *Vice-Presidents*, Drs. Richard McSherry and Thomas S. Latimer; *Recording Secretary*, Dr. W. G. Regester; *Assistant Secretary*, Dr. G. Lane Taneyhill; *Corresponding Secretary*, Dr. W. F. A. Kemp; *Reporting Secretary*, Dr. Eugene F. Cordell; *Treasurer*, Dr. Judson Gilman; *Executive Committee*, Drs. Frank Donaldson, P. C. Williams, H. P. C. Wilson, L. McLane Tiffany, and Christopher Johnston.

After the passage of a resolution of thanks to the authorities of the Johns Hopkins University for courtesies extended, and some congratulatory remarks by the President upon the harmony exhibited during the meeting and the prosperous outlook for the future, the Eighty-fourth Annual Session was declared adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 14, 1882.

DR. J. C. HUTCHISON, VICE-PRESIDENT, IN THE CHAIR.

FRACTURE OF THE ELBOW-JOINT—RECENT SUBJECTIVE NERVOUS SYMPTOMS.

DR. E. L. KEYES presented a patient to demonstrate the perfect function of an elbow-joint badly fractured during childhood and still ununited, and exhibiting evidences of failure of nutrition, and subjective nervous symptoms after quite recent active use. The patient, a man twenty-two years of age, had when about five years old, received a fracture of his left elbow. From this he recovered, and the joint, arm, and hand, gave him no inconvenience for about fifteen years. He had been able to follow the business of a travelling salesman. And all the motions of the forearm were equal with those in the uninjured limb. About one year ago he changed his occupation, and was more or less engaged in the active exercise of opening oysters. He soon began to suffer from pain in the left forearm, had a sensation of coldness along the course of the ulnar nerve, and soon afterward it was noticed that some of the muscles of the hand had diminished in size. When Dr. Keyes examined the arm he found that the external condyle had been fractured, and remained ununited, a certain amount of outgrowth of bone had occurred; and there was a partial dislocation outward of the external condyle, carrying the head of the radius with it. There was no atrophy of the muscles of the forearm, but the limb was of late numb and painful. There was atrophy of the interossei of the left hand, and particularly of the adductor pollicis. The subjective symptoms, as well as the atrophy, had developed within the last year since he had submitted the arm to more active exercise than formerly, and the question was whether anything could be done which would be likely to arrest the atrophy and restore the sensation of the arm. He had advised cessation from all active exercise of the hand and forearm together with the use of electricity.

DR. SABINE suggested, as a cause of the nervous symptoms, the possibility of pressure upon the ulnar nerve by the bony growth in close proximity with it, and if that could be definitely ascertained benefit might follow removal of the hyperostosis.

DR. POST suggested that it would be proper, as a prophylactic measure against the development of the claw-shaped hand, *griffe de la main*, in case appropriate measures failed to effect a radical cure, to wear some mechanical appliance, at least during the night-time, to resist the tendency to contraction.

DR. H. B. SANDS then read a paper on

THE QUESTION OF LAPAROTOMY FOR THE RELIEF OF ACUTE INTESTINAL OBSTRUCTION (see p. 427).

The following questions were submitted to the members of the society:

1. *What is the result of their experience in the performance of laparotomy for the relief of acute intestinal obstruction?*

DR. ERSKINE MASON had had three cases. The first, patient, a female, was in exceedingly poor condition at the time of the operation and the case terminated fatally. The second was a case of intussusception in which ulceration had taken place with extravasation into the peritoneal cavity, and the patient died.

The third was supposed to be a case of hernia reduced *en masse*. He found the intestine held to the abdominal wall by a band, and the patient died a few days after the operation from suppression of urine.

DR. J. L. LITTLE had performed the operation once, in a case of intussusception occurring in a child four years and eight months of age, a patient of Dr. Laurence Johnson, of this city. The intussusception was readily relieved, but the patient died of shock six hours after the operation, although before it was begun the child seemed to be in good general condition. There were no adhesions nor peritonitis. The intussusception was of the ileo-colic variety. The operation was performed in March, 1878. [See MEDICAL RECORD, vol. xiv., p. 6.]

DR. BRIDDON had operated in two cases, and both terminated fatally. One was a case in which a loop of intestine was strangulated in another loop of intestine that had become adherent to the wall of the abdomen. The other was a case of hernia into a pouch in the peritoneum near the cæcum. In neither case could recovery take place, as he believed, without an operation.

DR. J. C. HUTCHISON had had one case of cæcal intussusception in an adult, and the patient died of shock after the operation.

2. *What number of such cases have they known to terminate in recovery without operation?*

DR. POST reported one case. Many years ago he was called to see, in consultation, a boy ten years of age, who had had obstruction of the bowels from an unknown cause for five days. There was a hard swelling, somewhat smaller than the fist, upon one side of the abdomen—as he remembered, upon the right side—which could be distinctly felt through the abdominal walls. All known means for relieving intestinal obstruction had been adopted, and he regarded the case as almost hopeless, without laparotomy. There was some hesitation with reference to accepting the proposition to operate, and Dr. Gurdon Buck was added to the consultation, who suggested that operative interference be postponed for another day, and that in the meantime the patient take croton oil. Dr. Post thought it rather hazardous to administer the remedy, but acquiesced, and it was given, and the obstruction was re-

lieved. Other active cathartics had been given before the croton oil, but no relief had been afforded. Notwithstanding the good result apparently due to the croton oil, he should feel unwilling to recommend its use in another case under the same circumstances.

Many years ago, also, he was called upon to perform an autopsy upon the body of a child five or six years of age, who had inhaled a portion of a peanut-shell into the larynx, and suffered from symptoms of laryngeal obstruction, but these were soon masked by abdominal symptoms, pain, constipation, vomiting, tympanitis, and the child died. He found the portion of peanut-shell in the larynx, and also a mass of small intestine, six feet in length, strangulated by a band connected with the mesentery, and in its interior was a portion of what seemed to be a fin of a fish. Probably the violent coughing caused by the foreign body in the larynx produced strangulation of the intestine, and doubtless, laparotomy would have afforded a very good chance of relief.

Dr. George A. Peters had seen two cases. One had been alluded to by Dr. Sands in his paper, and another, similar in its history, occurred in a patient in private practice, when it was determined to wait a little longer before performing an operation, and, while waiting, Nature brought relief.

Dr. Keyes had seen two cases. In one the obstruction had been prolonged and absolute for a week, was apparently high up, and occurred in a patient about sixty-seven years of age. He was under the opium treatment when Dr. Keyes saw him. The patient had many notions of his own, and among them was the one that he would be benefited by injections through a long tube. He had been relieved of some intestinal gases in this way. "Jersey lightning," or apple-jack, was a substance he finally selected. Accordingly he injected a tumblerful, and it started up intestinal action which gave him relief. There was no distention of the abdomen. He had had a similar attack some seven or eight years before. The other patient was a middle-aged woman who had made a supper of fish, had eaten it skin and all, and had also taken a large number of grapes, swallowing both seeds and skins. It had been about two weeks since she had had any movement from the bowels. She had constant and purely fecal vomiting, distention of the abdomen, and exploration showed that the rectum was entirely empty. There was a tender spot at one side of the umbilicus, and she was etherized in order that a more complete examination of that region could be made. A certain amount of general thickening was found and some distinct enlargement, which was supposed to be fecal. This was kneaded and seemed to be broken up. Soon afterward the patient had a passage which contained a piece of fish-skin, about six inches long and an inch wide, together with a large number of grape seeds and grape-skins. This patient had also had one previous attack of prolonged constipation, four or five years before, which had been finally relieved by medicines.

Dr. L M. Yale referred to cases in which obstruction of less duration than in the cases thus far mentioned had been relieved without any operation. One was a case seen in consultation with Dr. Pinkham, of Montclair, and reported to the society in 1880. [See Medical Record, vol. xviii., p. 558.] In that case the symptoms were persistent constipation, vomiting of coffee-colored material, bloody discharges, pain in the lower part of the abdomen, and variable localized tympanitic percussion. There was no recognized tumor. A manual exploration of the bowel was made under ether, and soon afterward the patient's bowels began to move freely and he made a rapid recovery.

The second case was one in which the patient, eight months of age, had bronchitis that caused it to cough violently, and after an attack, during which the father dandled the child actively, it was seized with pain. The patient had always been constipated. When Dr. Yale saw the patient there was apparently collapse, although the temperature was not below normal. There were constipation, bloody stools, and vomiting, and he regarded the case as one of intussusception, which was relieved in the usual way.

While in attendance upon the child, the father mentioned another case which occurred in his family several years previously, and in which there was great pain, vomiting, and bloody stools, and the life of the child was despaired of. Suddenly she passed a portion of intestine which had sloughed off, enough to fill an ordinary saucer, and recovery dated from that time.

Of fatal cases he had seen many.

Dr. Post suggested that intussusception stood upon ground somewhat different from that occupied by other causes of obstruction of the bowel, inasmuch as there was a natural mode of relief for it which succeeded in quite a large proportion of cases. He then referred to a series of twenty-four reported cases which had been left to Nature, in which thirteen deaths occurred. In the remaining eleven sloughing away of a portion of intestine took place. Of these two died a short time after the sloughing but the remaining nine recovered entirely; more than thirty-three per cent. of the entire number.

He thought that so large a proportion of spontaneous cures did not take place in any other form of organic obstruction; and it was a question whether intussusception might not with greater safety be left to Nature than any other form of obstruction.

Dr. Weir had had no personal experience in the operation of laparotomy, though he had witnessed and assisted at its performance four times by surgeons present at this meeting. He had observed quite recently a striking case in which laparotomy was averted by a continuance of the expectant treatment.

In this instance there was an obscure, painful tumor in the right side of the abdomen, just above the site of an old inguinal hernia. The patient had but moderate distention of the abdomen, with frequent stercoraceous vomiting of three days' duration. He was then seen by Drs. Sands and Markoe in consultation. The question of laparotomy was considered, but it was voted to wait a few hours longer, during which time an amelioration of the symptoms took place, and the patient recovered without operative interference. During the past five years, since the New York Hospital had been rebuilt, there have been admitted to its wards only five cases, including the one just mentioned, of intestinal obstruction. Pain, distention, vomiting—only fecal once, however—occurred in all, with constipation varying from three to eleven days. They all recovered.

He himself believed from a clinical view that the distinction sought to be preserved between an acute and chronic obstruction was impracticable. It is generally assumed that when recovery takes place in intestinal obstruction that either an error in diagno-

sis had been made, or that the cause of it was either to be assigned to a fecal or other occluding mass, or to a compressing band, etc. Now such causes, he would emphasize, will give rise to all the symptoms to be met with in the so-called acute obstructions. He had seen, within the last month, a woman in whom all the features of acute intestinal obstruction, of three days' duration, were present; pain, elevation of temperature, vomiting, rapidly becoming fecal, a certain amount of distention of the abdomen, constipation, and some dulness just below the hepatic region, but no distinct tumor or other signs of invagination. Opium had been administered, and the temperature had fallen when he saw the patient. This led him, as in other cases, to advise the continuance of large enemata, which eventually gave the patient relief. The obstruction was fecal. It is this difficulty which hampers the surgeon in the resort to operative interference. Duchassoy has shown that in 500 cases of intestinal obstruction there were 134 situated in the large intestines, not including the cases of invagination. Taking away from these 86 cases of strictures, there were 48 due to fecal masses, urinary calculi, etc.

In a case of obstruction, the good effects of medical or expectant treatment are most likely to be obtained where the obstacle is situated in the large intestine—a portion of the alimentary canal whose condition as to distention can readily and safely be determined by manual exploration of the rectum. While, therefore, it is true that many cases do get well without an operation, yet this number is quite small after the appearance of undoubted fecal vomiting, and he himself would feel justified in advising, in a case where such vomiting had persisted more than twenty-four hours, and especially so in those obscure cases where the symptoms of invagination are wanting, the administration of ether, for the double purpose of permitting a more satisfactory resort to external palpation by relaxing the abdominal walls and for the exploration of the rectum by Simon's method, which in his estimation is of but little risk with a hand less than twenty centimetres in circumference. The hand need only, in many instances, be so far introduced as to ascertain the condition of the caput coli, and the regions on this level (though, finding the large intestine empty, it would be desirable to locate, if possible, the locality of the obstruction higher up). Should the large intestine be distended, either the use of injections, etc., can be continued, or colotomy resorted to, as the strength of the patient or urgency of the symptoms dictates.

The cause of death is not peritonitis, for that is only found in 13 out of 92 deaths from obstruction. Death results from the exhaustion of the patient, shown often in sudden collapse. The early external and internal exploration under ether, therefore, will, he would reiterate, exclude invaginations and obstructions (often relievable) in the large intestine, and enable the surgeon to employ laparotomy in cases in which delay can seldom prove advantageous.

Dr. J. L. Little had had four cases of intestinal obstruction, of which one terminated in recovery without operation. In this case the symptoms existed more than a week and were supposed to be due to intussusception. The case was regarded as hopeless. But a discharge from the bowels occurred, accompanied by considerable quantity of blood and the patient recovered.

In another case, in Norwalk, Conn., a patient of Dr. Nolan's, he advised laparotomy, but the patient refused to have it performed. The cause of the obstruction was not known. Great relief was given this patient by repeated puncture of the intestine, through the abdominal walls, with a hypodermic syringe, and subsequently with a trocar made for the purpose. Death occurred from exhaustion. No autopsy was made.

3. *Should laparotomy be performed at an early period in cases of acute obstruction, when no opinion can be formed respecting its character or situation?*

Dr. Briddon thought that question could not be answered without dividing acute cases into different classes. There were acute cases in which, the obstruction occurring high up or low down, usually high, the symptoms of collapse and shock were so marked that unless prompt relief was given by laparotomy, the patient would certainly die within two or three days. In other cases, where the obstruction was lower down, perhaps in the lower portion of the ileum, or in the colon, delay was justifiable, and, perhaps, relief would take place spontaneously after the expiration of from six to ten days. Again, the severity of the symptoms in acute obstructions depended upon the tightness with which the intestine was constricted or twisted; and if not very tight, life might be prolonged for a considerable period of time, and frequently the measures adopted finally afforded the relief desired. In the very acute cases, occurring with shock, collapse, and vomiting, he believed that laparotomy was imperatively demanded. But in the cases referred to in the paper, long delay was justifiable.

Dr. Sands said that the point he wished to determine, if possible, was whether the mere fact of obstruction would impel the surgeon to operate at once, or whether it would be a safer practice to await for a time the action of nature.

It was well known that the operation had been performed too late in many cases; but it did not seem to be fully considered that the alternative, the early operation, was a dangerous one. If the surgeon allowed the patient to die and then opened the abdomen and found a band which could have been easily divided, he would, of course, regret that the operation had not been performed. But the great difficulty, practically, was to determine positively whether or not the obstruction would finally be removed without operative interference. Several cases had been mentioned this evening, and many others were recorded in which the obstruction had yielded. And the question was whether that fact should not render caution necessary on the part of the surgeon in the early management of these cases.

Dr. Peters—I think it should.

Dr. Sands—In that event we shall be tempted to delay action until the patient's vital powers are so reduced that the success of an operation will be very slight, indeed. Thus the question might arise, whether the danger of delay would not be greater than the danger of a very early operation.

Again, it was to be remembered, that in a case of so-called obstruction, especially when developed suddenly, with pain, vomiting, and tympanites, and particularly when no tumor nor physical signs to indicate quite clearly the seat of the obstruction were found, the surgeon could not help suspecting that he might make an erroneous diagnosis if he put it down as a case of intestinal obstruction. Because, as Mr. Hutchison had well pointed out, the three cardinal symptoms of intestinal obstruction—namely, pain, vomiting, and tympanites, occurred with peritonitis, and were rather characteristic of peri-

toneal than of intestinal obstruction; for with intestinal obstruction, unless it is accompanied by peritonitis, tympanites is developed very gradually, and often is not marked until near the close of life.

If, then, the surgeon, in the absence of physical signs, relied upon pain, vomiting, tympanites, and constipation, as evidences of obstruction, and opened the abdomen to relieve it, he would incur the risk of invading the peritoneal cavity when there was peritonitis, but no intestinal obstruction. That was once done by Dr. Buchanan, of Glasgow, whose patient, strange to say, recovered, apparently in consequence of the operation.

Dr. Mason thought the patient should first have the full benefit of medicinal and other measures, and then if fecal vomiting came on, and the vital powers seem to be failing, he should be inclined to advise laparotomy as affording the best chance, probably, of saving the patient's life.

Dr. Yale mentioned one fact which he thought might have some value as an argument against the early operation, namely, the frequent existence of intussusception in fatal cases of entero-colitis in children, with many of the symptoms during life of obstruction; and yet it was well known that the intussusception did not, either directly or indirectly, cause the child's death.

Dr. A. C. Post presented the following report of the microscopical examination made by Dr. T. E. Satterthwaite of the specimen of sarcoma which he presented to the society January 10, 1882, the history having been given December 13, 1881. [See Medical Record, vol. xxi., p. 134.]

The growth was confined chiefly to the anterior surface of the tibia, its upper limit being three centimetres below the upper articular surface, and its lower limit nineteen centimetres distant from the lower articular surface. In length it measured seventeen centimetres; in breadth, ten centimetres. The growth seems to have radiated in the usual way from the periosteum, though the medullary cavity contained some deposits.

Microscopic examination.—Owing to the imperfect condition of the specimen when it reached Dr. Satterthwaite, the microscopic examination was not wholly satisfactory, though in those parts which admitted of preparation, the tissue was composed mainly of round corpuscles imbedded in a delicate homogeneous matrix with occasional bands of connective tissue. Interspersed throughout the tissue, also, was bony matter, extravasated blood, and glutinous material.

(To be continued.)]

The University of Virginia.—A correspondent of the *New Orleans Medical and Surgical Journal* writes as follows of the University of Virginia: "Had our Southern neighbors no other boast, they might well be proud of that University. Let us see what percentage of each class is graduated there. I have accurate data for two years only. In 1878–79 there were 53 men in the medical class; 48 of these applied for graduation, and 21 alone were successful. In 1879–80 there were 46 in the class; 31 applied and 10 only graduated. I had almost as soon be one of those 10 as a survivor of the 600 at Balaklava. Can we wonder at the small classes there? But the men of that faculty prefer a small class to a large one, where the pen which titles a fool tells a lie at every stroke."

Obituary.

ERSKINE MASON, A.M., M.D.,

NEW YORK.

Surgery has experienced a great loss in the death of Dr. Erskine Mason, of this city, who died quite suddenly on the 13th inst. Dr. Mason was born in this city in 1837, and was therefore in his prime at the time of his death. He graduated from Columbia College, in 1857, and from the College of Physicians and Surgeons in 1860, receiving in the same year the degree of A.M.

He immediately settled in the practice of his profession in this city, and soon gathered a large clientèle as a surgeon. He was one of the most industrious and active members of the Pathological Society, and almost from its inception took a leading part in its sessions, rising to the Presidency of that body in 1873, after passing only thirteen years in medical practice. He was also prominent in the transactions of the American Medical Association, to whose volumes many of his best papers were contributed, and in the Medical Society of the County of New York, at whose meetings he often presented original surgical memoirs. Among his contributions to medical literature which have appeared in the leading journals of the day may be specified his papers on the "Operation for Strangulated Hernia without Opening the Sac," Medical Record, August 1, 1868; "Lumbar Colotomy," *American Journal of the Medical Sciences*, October, 1873; "Operation of Laparotomy," Medical Record, June 10, 1876; and "Amputation of the Hip-joint," as the most elaborate and original of his professional memoirs. For some years he has held the position of Demonstrator of Anatomy in the College of Physicians and Surgeons. He has also been Adjunct Professor of Surgery in the medical department of the University of the City of New York, and Assistant Surgeon of the New York Eye and Ear Infirmary. He resigned his position in the University in 1876, in consequence of the increase of his private practice. He has also held the position of Surgeon to Bellevue Hospital, to the Roosevelt Hospital, and to the Colored Home.

Dr. Mason had acquired a very high reputation as a bold and skilful operator, and he was justly ranked among the first surgeons of the city.

His death will be widely regretted. He leaves a widow and three children.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 9, 1882, to April 15, 1882.

Cronkhite, H. M., Capt. and Asst. Surgeon. Granted leave of absence for four months from June 1, 1882. S. O. 80, C. S., A. G. O.

Carvallo, Carlos, Capt. and Asst. Surgeon. The extension of his leave of absence on surgeon's certificate of disability, granted him in S. O. 256, November 12, 1881, from A. G. O., is still further extended six months on account of sickness. S. O. 80, A. G. O., April 7, 1882.

Byrne, Charles B., Capt. and Asst. Surgeon (Fort Barrancas, Fla.). Assigned to temporary duty at Mount Vernon Barracks, Ala., during absence of Asst. Surgeon Cunningham. S. O. 41, Department of the South, April 12, 1882.

FINLEY, Capt. and Asst. Surgeon. Having reported at these Headquarters, is assigned to duty at Fort Concho, Tex. S. O. 35, Department of Texas, April 8, 1882.

SPENCER, WILLIAM G., Capt. and Asst. Surgeon. Granted leave of absence for four months, with permission to apply for an extension of two months. S. O. 80, C. S., A. G. O.

KING, WILLIAM H., Capt. and Asst. Surgeon. To be relieved from duty in the Department of the East on receipt of this order, and then to proceed to his home. Granted leave of absence until further orders, on account of sickness. S. O. 82, A. G. O., April 10, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 15, 1882.

Week Ending	Typhus Fever	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 8, 1882.	18	2	203	6	177	103	12	0
April 15, 1882	16	4	221	4	150	97	20	0

THE JOHNS HOPKINS HOSPITAL AND DR. CARROLL.—Dr. A. L. Carroll, of New Brighton, N. Y., writes: With due hesitation to impugn the accuracy of any statement made in THE MEDICAL RECORD, I beg leave to say that the paragraph in your issue of this date, relating to my removal to Baltimore and election to the faculty of the Hopkins University is, to the best of my knowledge and belief, entirely without foundation.

POST GRADUATE FACULTY OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.—The following members of the post-graduate faculty of this institution have tendered their resignations. Professors D. B. St. John Roosa, W. A. Hammond, J. W. S. Gouley, M. A. Pallen, F. R. Sturgis, H. G. Piffard, Stephen Smith, and J. L. Little.

AN ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL RESEARCH.—At a meeting of prominent medical and scientific men in London, March 28th, an Association for the Advancement of Medicine by Scientific Research, was organized. This association is the result of the long continued agitation over the subject of vivisection, and marks a distinct success, if not actual triumph, of science over a false philanthropy. The society in question does not represent the medical profession alone. Its officers will include the presidents of the two colleges in England, the chief executive officers of the Royal and other societies, and representatives from all the boards and corporations associated in the education or examination of men aiming to be practitioners of medicine. The association intends to superin end the work of anatomical study and physiological experimentation. It will give to the public a guarantee that such work is properly done, and it will secure safety and freedom from interruption to the experimenter. The agitation over vivisection in England has thus not been without benefits. It has attracted public attention to the work of medical men and physiologists. It has shown the English physician how barren in scientific work his country has become. With barriers now in part removed, with a society organized to further and protect experimental research, there is a prospect of much more original work being undertaken in Great Britain.

THE CHARITY ORGANIZATION SOCIETY.—A bill to incorporate this society has been introduced into the State Legislature. Its incorporators include a number of prominent medical men.

A CONGRESS FOR THE STUDY OF INTERNAL MEDICINE is to be organized in Germany. Complaint is made that while ophthalmologists, hygienists, balneologists, psychiatrists, surgeons, etc., all have general organizations, there is none for internal medicine. The proposed congress is to meet this month at Wiesbaden. Prof. Seitz is to preside.

IODOFORM IN DIPHTHERIA has been used by Dr. Sesemann, of St. Petersburg, with favorable results. He applies a mixture of iodoform, one part; milk sugar, three parts.

A CONGRESS OF NATTRALISTS AND GREEK PHYSICIANS meet in Athens, April 18th.

A PROVINCIAL BOARD OF HEALTH has just been created by the Legislature of Ontario.

THE DOCTOR AS A MINISTERIAL WHIP.—Dr. Widdifield, M.P.P., Ontario, was presented by the members of the local legislature with a costly service of silver, in recognition of his services as Ministerial Whip during the time he was member of the House.

PRIZES OF THE MEDICAL SOCIETY OF LONDON.—At the 109th annual meeting of this society, March 8th, the Fothergill gold medal was bestowed on Mr. Dolan, of Halifax, for a "Dissertation on the Pathology and Treatment of Whooping-Cough." A silver medal was given to Dr. Allen Sturge for his paper on "Muscular Atrophy;" and a silver medal to the retiring Honorary Secretary, Dr. T. Gilbert Smith.

BEQUESTS TO MEDICAL CHARITIES.—The Medical charities and other institutions of this city are again fortunate in the matter of bequests. The late Dr. E. L. Beadle, of Poughkeepsie, gave in his will $25,000, to be distributed, after its use for a life income, among the following institutions: The Presbyterian Hospital, St. Luke's Hospital, New York Eye and Ear Infirmary, New York Lying-in Asylum for Women, and New York Academy of Medicine. In each of the four first named, the sum is to be used to endow a bed in Dr. Beadle's name for poor patients. The Children's Hospital and Nursery, the N. Y. Society for the Relief of Widows and Orphans of Medical Men, and St. Barnabas Hospital, Poughkeepsie, each get about $5,000; also the Hudson River State Hospital and the Alumni Association of the College of Physicians and Surgeons. Dr. Beadle's medical library is given to the New York Academy of Medicine.

PROFESSOR KLEBS has accepted a call to the chair of Pathological anatomy at Zurich.

VACCINIA FOLLOWING SMALL-POX.—Dr. J. W. Bartlett, of Chicopee Falls, Mass., writes: "I notice in the RECORD of February 4th, an item by Dr. B. G. Bris-

toe, 'Vaccinia Following Small-Pox.' Some two months ago I vaccinated about nine hundred persons. Among this number (for experiment) I vaccinated four who, some years ago, had small-pox. Of the four, one had a perfect vaccine pock. The virus used was obtained of Dr. W. C. Martin & Son, Roxbury, Mass."

Failure of Hospital Saturday in London.—The *Students' Journal* states that the institution of the Hospital Saturdays in London has proved practically a failure. After several years' begging for alms in the public streets, benefit performances and other means, the sum subscribed by the whole of the working men in London for upward of one hundred hospitals is ridiculously small, amounting to a less amount than the workmen on the Clyde have often subscribed for a single Glasgow hospital.

Politics and Insane Asylums.—Dr. Robert S. Hamilton has been elected Medical Superintendent of the Western Lunatic Asylum, Staunton, Va., by the new Board of Directors, in place of Dr. A. M. Fauntleroy. Dr. Richard A. Wise likewise succeeds Dr. Harvey Black at the Eastern Lunatic Asylum, Williamsburg.

Drs. Fauntleroy and Black have been removed only on account of political reasons. More competent men could not be found in the profession than the physicians removed.—*Va. Medical Monthly.*

Iodoform and Naphthol in the Vienna General Hospital.—All wounds, no matter where they are, and in all the hospital clinics and wards, are treated with iodoform, and with splendid results. The iodoform powder is rubbed into gauze as we rub plaster of Paris into our bandages. This gauze is applied directly to a wound, after freely dusting the same with the powder; over the gauze comes a large pad of absorbent cotton, and over this a large piece of oiled silk or jaconet; then the bandage. Iodoform is a good deodorizer, and I have seen the gauze strips taken from the wound of an œsophagotomy after an eight days' stay with not the slightest odor, and the same from a collum uteri after removal of a carcinoma. Prof. Luecke of Strassburg is introducing naphthol in its place as a much cheaper and equally effective application.—*Cor. Buffalo Med. and Surg. Journ.*

Billroth and Albert.—Withal, Prof. Billroth, in spite of his great knowledge and attainments, has not the faculty of imparting it well to others. He is a type of the sturdy, stout German with whom life has gone well, is about sixty years of age, and wears a gray, full German beard. He speaks so low generally that the most of the sound is lost in his mustache and whiskers. Prof. Albert, who is much younger, has all the ability of Billroth as an operator, and is a teacher who arouses enthusiasm in all who hear him. It is more instructive to attend his clinical lectures on surgery than those of Billroth. Among the operations they have performed during the winter semester, beside such as above mentioned, are tracheotomies, lithotomies, litholapaxies, amputations, resection of joints, rhinoplasties, staphylorraphies, ligations of subclavian, etc.—*Dr. Peterson in Buffalo Med. and Surg. Journ.*

The Decline of the Vienna Medical School.—Dr. Peterson, writing from Vienna to the *Buffalo Medical and Surgical Journal*, says that Vienna is now the most expensive city in Europe, except London, that the assistants at the Vienna School prey upon the students, most courses of instruction costing from $10 to $25 per month. American and other foreign students are considered legitimate subjects for extortion. The number of eminent men in the professorial chairs is less and the ministerium has of late become negligent of securing the best talent.

Since the retirement of Hyrtl, who lives in a villa near the city, no one of importance occupies the chair of Anatomy. Von Brücke, in the department of Physiology, is second to no one but the Russian Purkinje. In Pathology are Weichselbaum and Hans Chiari, private docents, one of whom will be chosen to go to Gratz, and from April on, Kundrat. In experimental Pathology is the well-known Stricker. In Internal Medicine is Bamberger; Adalbert Duchek, who died a few days ago, was his associate. Surgery is represented by Billroth and Albert. On the Ear are Pollitzer and Urbantschitsch; on the Eye, Arlt and Stellwag. In Gynecology and Obstetrics we have Carl and Gustav Braun, Spaeth, Rokitansky, Jr., and Bandl. On Children's Diseases are Widerhofer and Monti. Kaposi, the son-in-law and also successor of Hebra, has charge of the clinic for Skin Diseases, and Hebra, Jr., and Neumann for Syphilis. The lectures in Psychiatry are given by Theodore Meynert and Leidesdorf; in Medical Chemistry, Ludwig; Laryngoscopy, Schrötter and Störk; Urinary Organs, Ultzmann.

American Diplomas in Australia.—The Department of State has received an official communication from Adelaide, South Australia, from which it appears that an amendment has recently been effected in the medical laws of that colony, whereby the holders of foreign diplomas are entitled to be registered as duly qualified medical practitioners. The Department of State has accordingly been asked to furnish a list of all the schools of medicine in this country which issue diplomas, or certificates of sufficient value to entitle their possessors to practice medicine in all its branches, and to hold Government medical appointments. The necessary steps have been taken by our Government to furnish this information, which will remove all obstacles in the way of American graduates practising medicine in South Australia.—*Medical and Surgical Reporter.*

Syphilis on the Fingers of Doctors.—Dr. Fessenden N. Otis, in *Independent Practitioner*, reports eight cases in which syphilis occurred on the fingers of medical men.

Children's Cottage Hospitals.—Dr. L. W. Baker, of Baldwinsville, Mass, writes that he is securing the erection near his residence of cottage hospital for children. The design is to provide hospital accommodations in the country under the best possible hygienic conditions, and fitted with all necessary appliances, in which children, from the city or elsewhere, suffering from chronic diseases, may receive medical care and careful nursing, together with all the advantages of fresh air, sunlight and good food, which country life affords, thus greatly increasing by these means their chances for speedy recovery. The project seems to be a good one and to have received support from a number of philanthropists and medical men.

Ovariotomy, Cystotomy, and Enterotomy were all performed at one sitting upon the same patient by Professor Billroth. The patient had an infiltrating cancer, which necessitated these extensive removals. She was alive at last accounts.

Original Communications.

ON THE VIOLA TRICOLOR (*L.*) AND ITS USE IN ECZEMA.[1]

By HENRY G. PIFFARD, M.D.,

NEW YORK.

GENTLEMEN: The plant to which I ask your attention this evening is familiar to English-speaking people under the simple name of Pansy, to the French as the *Pensée sauvage*, and to the Germans as the *Freisamkraut* and *Stiefmütterchen*. It grows wild in Germany and France, but in England and America is rarely met with except under cultivation. The alterations in its structure and appearance resulting from culture, are remarkable, and are well shown in specimens I exhibit; the first being excellent examples of the wild German plant, and the others the highest exponents of the florist's skill. These latter must be regarded from a botanical standpoint, simply as beautiful monstrosities, and from a pharmaceutical and medical aspect as almost unworthy of attention. The following statements will apply exclusively to the wild plant growing on the Continent of Europe.

History.—So far as I have been able to learn, the viola tricolor was first brought to the notice of the profession as a remedy in eczema by Strack, in a monograph entitled: "*De Crusta Lactea infantum, ejusdemque specifico remedio dissertatio*," published at Frankfort a. M., in 1779, a copy of which I show you. The "specific remedy" referred to in the title of this rare little book is the viola tricolor, known in the older pharmacy as *Jacea*. Strack was followed, six years later, by Dillenius,[2] who gives viola the same rank as a specific in eczema that he accords to cinchona and mercury in other spheres. He wrote as follows: "*In plurimis aliis morbis a miasmate ortis habentur specifica, uti contra miasma febris intermittentis cortex peruvianus, contra crustæ lacteæ miasma jacea, contra syphilitidem mercurius.*"

Later, Murray[3] quotes numerous authors in its favor. In 1796, Hahnemann makes brief mention of it in Hufeland's *Journal*.[4] In 1813, Graumüller[5] speaks of it as specially useful in milk-crust of children, in which, he says, it is specific. In 1818, Jahn[6] speaks in the highest terms of its usefulness, and Roques,[7] in 1837, calls it a "precious plant" in eczema. Fuchs,[8] in 1840, and Frank,[9] in 1843, praise it highly. About this time Hebra began to exert an influence on dermatology in Germany, and as he regarded eczema as a purely local disease, and devoted his energies to the search for local remedies with which to combat it, this plant was neglected and its virtues were forgotten. Modern German writers, especially those of the Hebraic school, rarely refer to it, and one of the most recent, Kaposi,[10] denies that it possesses even the slightest influence on the course of cutaneous affections, a statement which is absolutely at variance with the facts, as any one who chooses to make the experiment can easily ascertain.

French writers are almost unanimous in its favor, and the drug is at the present day in constant use at the Hôpital St. Louis in Paris.

In England the drug appears to have been little used, and I do not know of a single dermatological writer of that country who alludes to it.

The American literature of viola tricolor is exceedingly scanty, little having appeared on the subject.

Pharmacy.—Strack preferred the fresh herb, deprived of root and flowers. Of this he ordered a "fistful" (*pugillum unum*), boiled with milk, to be taken morning and night. In default of the fresh herb he used that dried in the shade, macerating half a drachm of the powder in milk for two hours, then boiling it and, after straining, giving it twice a day.

This method of administering the remedy appears to have been the favorite for many years, although an infusion made with water simply was much used. French writers, and especially Hardy,[11] recommend its use in combination with senna. Personally, I have employed the dry herb, and preparations made from it, both singly and in combination with other drugs. My first use of viola dates back about fifteen years, having been led to try it in consequence of the statements contained in the writings of Hardy. In the beginning I used it as recommended by this author—that is, mixed with senna in the proportion of two parts of viola to one part of senna. An infusion with hot water was made and given in doses sufficient to produce free catharsis for several days, and afterward continued in simply laxative doses, the patient himself, if an adult, adjusting the dose so that he would obtain about two loose stools a day. Later, I experimented with the viola by itself, still giving it in infusion. This method of administering it, however, was troublesome; with women and children the "pansy tea" could be managed without great difficulty, but with men, especially those not surrounded by home comforts, or ready access to a tea-kettle, this plan of giving it proved very inconvenient. I next experimented with the homœopathic mother tincture.[12] This preparation did not appear to give as good therapeutic results as the infusion, and after fair trial was abandoned, and the latter preparation returned to, despite its inconveniences. Still later, I obtained a quantity of the solid aqueous extract, kindly prepared for me by Dr. Chas. Rice at the pharmaceutical laboratory of Bellevue Hospital. This preparation would not keep, the summer's heat causing it to ferment.

Up to this time the results obtained from viola tricolor varied greatly. Sometimes they were unmistakably brilliant, at other times, in apparently similar cases, they were negative. Suspecting that the quality of the drug furnished on prescription might have something to do with this, I procured samples from a number of drug stores. Of these four were found to be genuine viola tricolor—one of good quality and three old and deteriorated.[13] One

[1] Read at the meeting of the Materia Medica Society, March 23, 1882.

[2] Diss. inaug. de Lichene pyxidato. Neoguntiæ, 1785.

[3] Apparatus medicaminum, vol. i. Göttingen, 1793.

[4] Vol. ii., p. 502.

[5] Handbuch der pharmaceutisch-medicinischen Botanik, vol. i., p. 308.

[6] Auswahl der wirksamsten, einfachen und zusammengesetzten Arzneimittel. u. s. w., vol. ii., p. 666. Erfurt.

[7] Nouveau Traité des Plantes usuelles, etc., vol. i., 390.

[8] Die krankhaften Veränderungen der Haut u. ihre Anhänge. Gottingen.

[9] Die Hautkrankheiten. Uebers. von Voigt. Leipzig.

[10] Pathologie u. Therapie der Hautkrankheiten, p. 101. Wien u. Leipzig, 1880.

[11] Leçons sur les maladies de la peau. Paris, 1860-3.

[12] Prepared by macerating the fresh herb with two parts by weight of strong alcohol.

[13] Apropos of this, the experience recorded by Hufeland may be cited. This eminent physician and writer says (*Journ. d. pract. Arzneikunde u. Wundarzneikunst.* B. XI., St. 4., p. 137): "It has

sample was *viola odorata*, two were *viola pedata*, and three were unrecognized. This experience induced me to make a special importation of the drug, which, on trial, I found to give much more uniform and very satisfactory results. Since then I have depended almost entirely on such importations for the necessary supplies.

The use of the herb in infusion still proving inconvenient, I sought some better way of employing it. This I found in a fluid extract made for me by Dr. Squibb, according to his "repercolation" process, using very dilute (twenty-five per cent.) alcohol as the menstruum, and during the past eighteen months I have prescribed about twenty pounds made by Dr. Squibb, and an equal quantity prepared in the same manner by Messrs. Caswell, Hazard & Co. These preparations have proved in every way satisfactory.

Chemistry.—The older chemical researches into the constitution of viola tricolor yielded almost negative results, nothing being found in the plant to account for its apparent activity. Within the last two years, however, Maudelin has subjected the herb to very thorough and careful analysis, and the results have been recently published.[14]

This experimenter succeeded in isolating an organic crystalline substance, which was found to possess the physical properties, and chemical characteristics of ordinary *salicylic acid*, thus showing that the humble herb, despised by modern German dermatologists as inert, in reality contains as an ingredient a substance, which a German experimenter (Kolbe) brought to the front as an active and useful drug, and which physicians generally would be sorry to be deprived of.

Physiological action.—Observations relative to the pure physiological effects of viola tricolor, that is, its effects on the healthy, are almost entirely wanting; but its effects on organs other than the skin, in those suffering from cutaneous disease, have been recorded by several, commencing with Strack. This observer states that, given in medicinal doses, it neither pukes nor purges; in fact, causes little systemic disturbance other than increased diuresis, and a decided alteration in the odor of the urine. This is confirmed by the personal observations of Hufeland and others, and has also been observed by the present writer. Little has been added to this, except a so-called proving, published, in 1828, by Stapf, in the *Archiv f. d. homöop. Heilk.*, B. VII., H. 2, p. 173, in which effects, presumably observed on the healthy, are inextricably mixed up with those occurring in patients. Stapf's collection appears to be based on the observations of Gutmann, Hahnemann, Franz, Wislicenus, Langhammer, Hufeland, and Haase,[15] the first five of whom were adherents of the Homœopathic sect, and the effects recorded by them were probably observed after the administration of large doses of a mixture of the expressed juice of the plant with an equal quantity of alcohol. This proving, together with a few additional observations, will be found in Allen's "Encyclopædia," vol. x.

The recent discovery by Maudelin of salicylic acid in viola tricolor lends an additional interest to the question of its physiological effects, and induced the writer to institute a comparison between the crude viola and its presumed active principle.[16]

The result is here given:

Effects of Viola Tricolor on Various Organs.[17]

Head.—Confusion and dulness; heaviness of the head; headache; burning sensation in the scalp above the forehead.

Eye.—Stitches in the eyes; lids droop; pupils contracted; vision obscured.

Nose.—Itching pressure toward the left side of the nose.

Mouth.—Tongue white and covered with mucus having a bitter taste; much saliva, with sensation of dryness of the mouth.

Abdomen.—Sticking and griping pains.

Urinary organs.—Tenesmus and frequent desire to urinate; profuse urination; urine turbid, offensive, smells like cat's urine.

Temperature.—Heat over the whole body—night-sweats.

Skin.—Nettic-rash over the whole body; itching and burning sensation.

Effects of Salicylic Acid.[18]

Head.—Vertigo; dulness; rush of blood to the head; headache.

Eye.—Diminished acuteness of vision.

Nose.—Sneezing.

Mouth.—Dryness and burning in the mouth; extremely disgusting taste.

Abdomen.—Vomiting.

Urinary organs.—Urine of a greenish tinge, filled with floating crystals that, on standing, settle to the bottom of the vessel. If the crystals are filtered off, the urine soon becomes putrid, but if not removed, the urine will remain fresh for a week.[19]

Temperature.—Increased warmth of the skin; sweats.

Skin.—Petechiæ and ecchymoses; burning, itching, and desquamation.[20]

Effects from Salicylate of Sodium.

Skin.—Severe pruritus, redness, and urticarial eruption (Heinlein).[21] Lichenoid eruption.[22]

The foregoing observations, taken for what they may be worth, certainly exhibit a striking correspondence between the effects of viola tricolor, as recorded fifty years ago, and those of salicylic acid of more recent date; and when it is remembered that they were made and recorded before the presence of salicylic acid in the viola was suspected, their significance should not be overlooked.

Therapeutic observations and uses.—Returning now to Strack, we find in his essay records of several cases of eczema of the scalp and face treated with viola tricolor in the doses we have already mentioned (℥j., *mane nocteque*). He notes at the very start that when thus given the eruption at first becomes worse, and the exudation and crusting more exuberant; this condition persists for some days, when a change for the better occurs, and the patient then makes rapid progress toward recovery.[23] The following case recorded by Hufeland eighty years ago,[24] exhibits so graphically the combined effects of

several times happened that I have given this drug to children for two or three weeks at a time without the slightest effect (*geringsten Erfolg*), and the cause was clear when I ascertained that the drug was impaired by age or improper preservation. . . . I specially observed that the fresher the herb the more active it appeared to be (*Ueberhaupt je frischer das Kraut war je wirksamer schien es mir zu seyn.*)"

[14] Untersuchungen über das Vorkommen u. über die Verbreitung der Salicylsäure in der Pflanzenzattung Viola. Dorpat, 1881.

[15] In 1782 Hanse publishi Ln dissertation i n viola tricolor. I regret that I have not been nble to gain access to a copy of the work.

[16] Until some other physiologically active substance is discovered in viola tricolor, it is a fair presumption that its therapeutic activity depends in part, if not wholly, on salicylic acid.

[17] Extracted and condensed from Allen's Encyclopædia (l. c.); most of it originally from Stapf's Archiv (1828).

[18] From Allen's Encyclopædia Effects of the drug from administration of doses of four to twelve grammes (60–180 grains) in patients, collected by Allen from numerous authorities. It is to be regretted that the authorities are not mentioned, as abstracts and quotations are, through clerical errors, frequently found to be at variance with the originals.

[19] Reported by Dr. J. A. E. Stuart as the result of an experiment on himself with nine grammes of salicylic acid. Practitioner, June, 1877, p. 425.

[20] Frendenberg. Berl. Klin. Wochenschrift, October 21, 1878.

[21] Jahresbericht üb. d. Leist. u. Fortsch. n. s. w., 1879, B. I., p. 409.

[22] C. S.: Boston Medical and Surgical Journal, June 1, 1880.

[23] Strack's first two cases are recorded as follows: "*Fina mercurialis B. den as crustas lacte is dra, etiam unitis diversis remediis, retinuit. Assumta octidua facta, crustæ vehementer crumperunt intermixtæ pure, ulcera septimana decidierunt; tertia nihil ex morbo superfuit, nihil vehementidem fuerit. Simila ratione intra duas septimanas sanata est filia Dominæ B. quæ totam faciem crusta ante abducta habebat.*"

[24] Ueber den Milchschorf (*Crustea Lactea*) und dessen Zurückhelta Jour. d. pract. Arzneykunde u.s.w., 1800, B. IL, st. 4. p. 126–29.

eczema and full doses of viola, that I quote it freely. Hufeland says: "I once saw the disease in a fifteen-year-old child, who had also suffered from it in infancy, and at the eighth year, and now, for the third time, was suffering severely. The worthy mother of the child drew from her pocket the prescription which she said had already twice cured her son of his eruption. It proved to be the *Flos trinitatis offic. seu Jacea*. When the eruption appeared for the third time with little vesicles (*Blätterchen*) on the forehead and cheek, she believed that the old evil had returned, and forthwith administered two cupfuls of strong Jacea tea (*Satwirten Thee von der Jacea*) morning and night. The vesicles began to dry up, the eruption became less evident, and the tea was discontinued. After eight or ten days however the eruption again came to the front. The tea was resumed, but its effects were quite different. The skin of the face became tense and swollen, and the eruption broke out on fresh spots and spread over the whole face, and even behind the ears. The glands in the neck were swollen, and the patient, in consequence of the severe tension of the skin, could hardly turn his head. The eyes alone remained clear. . . . Now, after several days, the entire face became covered with a thick crust, which here and there cracked and gave issue to a yellowish viscid matter that thickened and hardened like gum. Owing to the overhanging crust, the patient could with difficulty open the eyelids. Together with the eruption there was an insufferable itching, which caused the youth to scratch and tear the crusts even in his sleep, and when morning came it was found necessary to tie his hands to the bed to keep him from scratching. . . . The urine increased to an unusual amount, and stank horribly, pervading the entire room with an odor like that of cat's urine."

The increase of the eruption after full doses of the drug, as described by Strack and Hufeland, I have personally witnessed almost times without number, and it may be stated as a proposition easy of verification, that if viola tricolor be given to a child suffering from *acute* eczema, in doses of thirty to sixty grains, or to adults in proportionately larger doses, the most prominent early effects will be decided aggravation of the eruption and increase of area invaded by it, together with increase of local heat and pruritus. This condition may be expected within from three to six days after commencing the use of the drug, and reaches its height in about a week later. After this it sometimes subsides, even during a continuance of the medicine, and recovery rapidly ensues. At other times the patient protests against the continuance of the remedy which he very properly credits with the aggravation of his sufferings. If it be now stopped, the eruption decreases, and in a short time he finds himself either entirely well, or somewhat better than before he began treatment. A second or a third course often completes the cure. In this manner I formerly used the viola, and these were the results I observed, when by lucky chance my patient was fortunate enough to obtain a good quality of the herb. Since I have taken pains to secure such a quality these results have been much more constant. The very decided primary aggravation of the eruption which usually followed the above described method of administration was by no means an agreeable addition to the patient's sufferings, and was one to be avoided if possible. Reflection and increased experience have in great measure enabled me to obviate this difficulty.

I refer to the use of the drug in the *acute* form of the disease. It was simply a question of dose, of the dose best adapted to the individual case in hand. For young children the proper quantity to begin with is from one to five drops of the fluid extract (made as described above) once or twice a day. If the case progress favorably the dose should be maintained; if no effects appear it should be increased; if aggravation occurs the medicine should be discontinued for a few days and afterward resumed in smaller doses than at first. In *subacute* and *chronic* eczemata, the commencing dose should be much larger, ten or fifteen drops at least; this, I continue, or increase, if necessary, until the eruption begins to show signs of activity, that is until a decided aggravation is imminent. At this point the dose should be discontinued, as before mentioned, and resumed in less quantity. In adults the commencing dose may be placed at from five to ten minims in acute, and from half a drachm to two drachms in subacute cases.

The dose having been selected, it is my custom to direct that it be taken in a small quantity of water, once, twice, or three times a day, always on an empty stomach, and when possible about half an hour before meals.

The question of dosage and administration being settled, it may properly be asked under what circumstances and in what forms of eczema viola tricolor will prove most useful. The best and most striking results that I have obtained, have been in the second stage, with serous or sero-purulent exudation and crusting. In the first stage I rarely have an opportunity of using this or any other medication, and in the third or scaly stage other remedies appear to answer as well if not better. In a certain proportion of cases, I precede its administration with a single full mercurial, either blue pill or calomel and jalap, and in perhaps one-third of the cases appropriate local treatment is conjoined.

Theoretical.—To those fond of theorizing on the action of medicines, and to those who are continually searching for explanations of observed facts, this article would hardly seem complete without some attempt to explain the manner in which viola acts in the relief of eczema. In other words, is its action antipathic, homœopathic, allopathic, or, if not, what?

Is it antipathic? The fact that viola taken in medicinal doses aggravates the eruption at the beginning negatives the view that its action is antipathic.

Is it homœopathic? It was so claimed by Hahnemann in his first essay on Homœopathy, in the following words: "The pansy violet *(viola tricolor)* at first increases cutaneous eruptions, and thus shows its power to produce skin diseases, and consequently to cure the same effectually and permanently."[25] In this sentence we have a premise that is correct, and two conclusions that are neither logical sequences nor warrantable inferences from the premise. The Hahnemannian claim, it seems to me, is not substantiated. If now we refer to the physiological action of the drug in support of the homœopathicity, so-called, of viola tricolor to eczema, we find nothing therein to sustain this view. Urticaria, it is stated, may follow the ingestion of viola; but urticaria can hardly be considered a disease in any way similar to eczema, and hence the successful use of viola in eczema cannot be brought forward as an exemplification of homœopathic action. Ur-

[25] Dudgeon's Translation.

aria, moreover, may follow the ingestion of crabs, sters, oysters, chloral hydrate, and a variety of ier substances, which no one, so far as I am aware, as yet brought forward as specially useful in the treatment of eczema. Further, if viola tricolor were homœopathic to eczema, it should prove, according to the Hahnemannian doctrine, most useful when given in infinitesimal doses. Such, I have no hesitation in stating, is not the case, and I base this statement on the results of personal experiment. A recent homœopathic writer, in recommending the use of viola in eczema, says: "I usually have about one drachm of the dried herb boiled in half a pint of water, and of this tea prescribe one drachm two, three, or four times a day in milk slightly sweetened. . . . Frequently, in alternation with the tea, I have given the first or second dilution or the thirtieth, but have not been able to discover any marked difference in the course of the disease produced thereby."[26]

Baehr, another homœopathic writer, who evidently experimented with viola tricolor in dilutions, speaks of it as of little or no use in eczema.[27]

If neither antipathic nor homœopathic, is the action allopathic? Allopathic treatment consists essentially in treatment by derivation, or counter-irritation, whereby irritation is set up in some organ other than the one which we hope to relieve. Now, it is a well-known fact that eczemata will sometimes disappear during the existence of a free purgation, whether the result of catharties or occurring spontaneously. In these instances the cure, if such it be called, is allopathic. Viola tricolor, however, in medicinal doses does not produce catharsis or irritation of other organs, the only alteration of the bodily functions being slightly increased diuresis. This treatment cannot, therefore, be properly termed allopathic.

Is it specific? As we have already seen, Strack, Dillenius and others, and, I may add, Hufeland,[28] so regarded it. If they used the term "specific" in the sense that we often see it applied to cinchona in connection with malaria, and to mercury in relation to syphilis, namely, as the best single remedies yet known for the diseases mentioned, I think they were fully justified in so doing. I know of no other drug that singly and alone is capable of affording so much relief to that frequent and frequently obstinate disease, eczema, as the viola tricolor.

It will thus be seen that antipathy, homœopathy, and allopathy, using these words in their correct significations, alike fail to explain the action of the drug we are considering; and, if the same examination be made of cinchona and mercury in the connections referred to, it will be found that they also fall into the category of drugs for the successful action of which no systematic explanation has yet been offered. The term "specific" has no scientific definition, and hence cannot be used with propriety except as a provisional cover for our own ignorance. For this reason I offer no objection to its use as above.

Conclusion.—It may not be out of place to allude to certain views advanced by me some years ago relative to the nature and causation of eczema and its dependence on a diathesis closely allied to that which underlies rheumatism. The facts connecting salicylic acid with viola tricolor must, I think, be taken as corroborative of the inductions then made.

Two problems yet remain to be investigated. Will salicylic acid itself prove as useful in eczema as viola? Will viola prove useful in rheumatism? The first of these I have under present study, the second I leave to the investigation of others.

[26] Bigler, Hahn. Month., January, 1880.

[27] "Von *viola tricolor* haben wir dabei nicma's eine auch nur geringe Heilwirkung gesehen. Die Therapie u. s. w., B. II., p. 520. Leipzig, 1866.

[28] "Mir hat die *Lavea* in der *Crusta lactea* immer vortreffliche Dienste geleistet, so, dass ich vollkommen berechtigt bin, wie Herr Prof. *Strak* sie hier ein *Specificum* in dieser Krankheit zu halten." Jour. d. pract. Arzneyk., B. II., St. 4., p. 129.

OBSERVATIONS ON HEMIPLEGIA,

BASED ON EIGHTY-ONE RECORDED CASES, WITH SPECIAL REFERENCE TO CEREBRAL LOCALIZATION.

BY A. D. ROCKWELL, A.M., M.D.,

ELECTRO-THERAPEUTIST TO THE N. Y. STATE WOMAN'S HOSPITAL, ETC.

TYPICAL CASE OF HEMIPLEGIA—LESIONS OF THE CORPUS STRIATUM—RELATIVE FREQUENCY OF RIGHT AND LEFT HEMIPLEGIA—ORGANIC APHASIA—FUNCTIONAL APHASIA—ACUTE SLOUGHING—INCREASED TEMPERATURE AND SWELLING OF PARALYZED MEMBERS—LESIONS OF THE OPTIC THALAMUS, CRUS CEREBRI, AND PONS VAROLII—"PULSUS DEFERENS"—LESIONS OF THE CORTICAL SUBSTANCE—IRREGULAR FORMS OF ANÆSTHESIA—UNILATERAL HYPERÆSTHESIA—SPASM OF VESSELS—INTERMITTENT HEMIPLEGIA—SUDDEN LOSS OF SIGHT, FOLLOWED BY RECOVERY.

I HAVE records of eighty-one cases of hemiplegia that have been under my care during the past fourteen years, and it has occurred to me that some sort of an analysis of them might be not altogether valueless, both in a statistical point of view and as a clinical contribution to cerebral localization. The symptoms and the grouping of symptoms in many cases of hemiplegia vary very widely, and this variation, it is hardly necessary to say, is due to the special part or parts of the brain-substance that are damaged. Every disease and every pathological condition, however, has its common and readily recognized type, and the typical hemiplegic finds his counterpart in the following case:

Mr. X——, aged sixty-two, suddenly, and without marked premonitory symptoms, became partially unconscious, and on recovery found that his right leg and arm were completely paralyzed.

The face was drawn sharply toward the non-paralyzed side, and the tip of the tongue when protruded deviated to the paralyzed side. There was some aphasia, and the utterance was thick, but the intellect was undisturbed. Some anæsthesia of the extremities was present, but the electro-muscular irritability was normal. In the course of two weeks the patient was able to articulate with almost his usual clearness, and the aphasia had entirely disappeared. He could take a few steps around the room, while the paralysis of the face and tongue had improved in a considerably greater degree. In three months' time the patient was able to walk about at will, although the toe pointed somewhat downward, with a tendency to drag. The characteristic and almost pathognomonic circumduction of the leg had, however, almost entirely disappeared. As is usual in these cases, the arm recovered much less rapidly than the leg, and it was many months before he could raise it over his head or utilize it in any considerable degree. The regional or anatomical diagnosis in this case was effusion of moderate quantity into or in the immediate neighborhood of the corpus striatum. This patient finally so far recovered that he could walk with hardly a perceptible

limp, while the facial muscles and tongue were quite restored to their normal condition.

The arm, however, remained decidedly weaker than its fellow until the occurrence of death, some two years subsequently—from a second and more profuse hemorrhage. In addition to this case, I find a sufficiently detailed record of eighteen others, the symptoms of which were enough in accord with the one just given as to justify a similar diagnosis as to the probable seat of the lesion. In thirteen of these nineteen cases the paralysis was on the right side, and in the remaining six upon the left side. Of these thirteen cases, involving lesions of the left hemisphere, nine were in a greater or less degree amnesic or aphasic, while of the six cases involving lesions of the right hemisphere, not one was complicated with aphasia or its kindred symptoms.

This experience is in accord with the generally accepted view that aphasic symptoms follow lesions of the left cerebral hemisphere rather than the right, and that the posterior portion of the third convolution is the most frequent seat of structural change.

In analyzing all my cases—81 in number—with reference to the side affected, I find that right hemiplegia preponderated in about the same proportion as in the 19 typical cases (lesions in or about the corpus striatum) just referred to. Right hemiplegia occurred 49 times; left hemiplegia, 30 times, and double hemiplegia twice. While it is evident that complete and persistent hemiplegia with aphasic symptoms depends upon positive lesion of the left hemisphere, as a matter of fact, the aphasia very frequently disappears, almost entirely, while yet the paralysis of motion remains. This could not well be explained if it were true, as M. Broca long ago declared that the faculty of articulate language was located in the third left frontal convolution. On the contrary, the experiments of Fritsch, Hitzig, and Ferrier show that in every essential point the brain is symmetrical.

It is rational to believe, therefore, that the reason why loss of the co-ordinating power of speech is so universally associated with left cerebral lesion is, that as most people are right-handed, so are they left-brained, and in lesions of the left hemisphere with aphasic symptoms the memory of words is not totally destroyed, but the victim is without the power of articulate speech, because the right side of the brain has been so little exercised as to be incapable of at once acting alone. When aphasic symptoms disappear, therefore, it may be said that the right side of the brain becomes educated, in the same way that the left hand is educated when its fellow becomes disabled.

In regard to the side of the lesion in aphasia, it may be remarked that Trousseau, in a most extensive hospital experience, met with but one case of left hemiplegia associated with aphasic symptoms, which, at the time, he asserted to be the only one on record. It would be interesting if it were known whether Trousseau's case was left-handed as well.

Aphasia may undoubtedly occur without coincident paralysis, and dependent upon no serious structural changes. The single case of this character that has come under my observation occurred during convalescence from a severe attack of typhoid fever. The patient first noticed a slight impairment of the co-ordinating power of expression, which day by day increased in degree until he lost almost completely the power of intelligible converse. Under a general tonic treatment this patient finally recovered.

Slight disturbances of speech, unassociated with paralysis, generally disappear rapidly and without treatment, and if, as it is possible, a local change takes place, it can hardly be more than some slight so-called molecular disturbance. Following a somewhat graver central lesion, we have aphasia associated with paralysis, more or less persistent, but amenable to a greater or less extent to time and treatment.

As illustrating this condition, I give the following case, in which the treatment adopted seemed to be immediately and positively beneficial.

I was consulted December 7, 1873, by a lawyer, aged fifty-three. One morning, about eight months prior, he arose in his usual health, and for some hours attended closely in his office to a press of business that had accumulated during a few days' absence from the city. While thus engaged, he observed that his right leg was a little numb, and that there was a disagreeable sensation of tingling in the fingers of the right hand.

Almost immediately he felt that his whole right side was paralyzed, and on attempting to speak, found that he could not do so intelligibly. In a few days the patient regained almost the normal power over the paralyzed members, but his speech returned more slowly, and for three months before I saw him there had been little progress.

He could speak short, disconnected sentences well enough, but when he attempted to engage in animated conversation, he not only constantly used words that utterly failed to convey his ideas, but frequently, all remembrance and power of expression seemed to forsake him, so that he was unable to proceed until reminded of the proper word, and the thought that he had been expressing.

The patient was treated for about a month by central galvanization, and with such marked benefit that in a few weeks he was able to converse with much greater readiness.

While aphasia is a result peculiar to injuries to the left, it is claimed that there are certain symptoms peculiar to injuries of the right cerebrum. Tonic spasms of the limbs and conjugated deviation of the eyes, are said to occur in the proportion of about two-thirds of the cases for left hemiplegia, and it has been found by Brown-Séquard that the same proportion of the "recorded cases of bed-sores, or acute sloughing in cases of hemiplegia, have occurred where the paralysis of the limbs has been on the left side."* My experience tends to confirm this statement, since of two cases of acute sloughing that I have seen, both were associated with lesions of the right hemisphere.

This symptom is regarded as indicative of speedy dissolution, and is believed to depend on trophic rather than on vaso-motor changes. In my own cases the patients died within a few weeks of the appearance of the sloughing.

In a certain rather limited proportion of cases of hemiplegia, we find that the paralyzed limbs become hot and swollen, and remain in this condition for an indefinite length of time. Out of the whole number of my cases, these symptoms were associated with five, and were especially marked in the following:

The patient, a man aged sixty, became suddenly numb throughout his right side, but speedily recovered. Soon after the attack was repeated, and with a similar result. The third attack resulted in

* Bastian: Paralysis from Brain Disease

complete paralysis of the right side, followed by swelling and increased temperature.

Six months subsequently when I saw him the symptoms were typical of an ordinary lesion of the corpus striatum and neighboring parts, with the exception of the heat and swelling referred to.

It was evident in this, as in other cases associated with this special symptom, that the lesion, whatever or wherever it was, exerted an inhibitory influence, either directly or reflexly, on the vaso-motor centre.

The pons varolii is regarded as especially a regulative centre for vaso-motor nerves, but the symptoms were manifestly not those that follow damage to that sensitive body. It was hardly possible to locate the lesion in the crus cerebri, as in such a case there would probably be a concurrent paralysis of the third nerve.

Injuries to the optic thalamus, however, owing to its close proximity to the principal vaso-motor centre, have so frequently been found associated with these symptoms of increased temperature and swelling, that in the case related, this part was believed to be seriously involved.

Of two cases that have fallen under my observation, where the lesion was supposed to involve both the pons varolii and the crus cerebri, I give here the history of one. The attack occurred suddenly in the person of a working man aged fifty-five, who, for years before had not been detained at home even for a day by reason of illness. The character of the paralysis relating to the extremities, the face, and the tongue was of the usual character. Beyond this, however, there was some difficulty of deglutition, with painful hyperæsthesia of the paralyzed side of the face, due probably to injury to the fifth nerve. The patient also became exceedingly emotional, bursting into tears at the slightest cause, and frequently without cause. These symptoms pointed undoubtedly to lesion of the pons in its upper lateral portion. The symptom that indicated damage to the crus cerebri was paralysis of the third nerve, on the same side as the brain lesion. The results of this condition are well known, being ptosis of the eyelid, dilatation of the pupil, and external squint. This last symptom is due to the fact that all the muscles of the eyeball become paralyzed, except the external rectus and superior oblique. The temperature of the paralyzed limbs was decidedly higher than normal, as has been frequently observed in demonstrated cases of lesions of the pons varolii.

In a speedily fatal case that I saw a few weeks ago, in consultation with Dr. A. R. Carman, in addition to the difficulty of deglutition, paralysis of the tongue, and other symptoms indicative of damage to the pons varolii, we noted a rare symptom, designated by the term "pulsus deferens." The pulse in the right radial artery would repeatedly disappear and reappear, and was suggestive as indicating injury to the vaso-motor nerve-tracts and consequent interference with the contractile power of the arterial walls.

Severe injuries to the pons in its central part give rise to profound coma with double hemiplegia. These cases are, as a rule, rapidly fatal. If the damage to this central part is slight, the patient may regain consciousness, but with a more or less marked bilateral paralysis. When the lower half of one lateral region is involved, the facial paralysis is on the side of the brain lesion, while the limbs of the opposite side are affected in the usual manner. It is readily understood that this so-called alternate paralysis occurs because the fibres of the facial are damaged below, instead of above their decussation in the pons, while the motor fibres supplying the extremities become involved above their decussation in the medulla. I have no record of any case in which this irregular complication existed.

The cortical substance of the brain is very frequently the seat of effusion, and the combinations of symptoms following damage to this part are many.

A very interesting case, in which I was led to believe that this was the damaged portion, came under my care a few weeks since in the person of a physician in an adjoining city. Four years ago, after suffering for some time from intense pain in the head, associated with a tendency to sleep, he became suddenly unconscious and fell to the ground. The resultant hemiplegia, at first incomplete, soon became complete. In five days he began gradually to regain the power of motion, until in this respect he had quite recovered. At no time was there marked anæsthesia, and but very slight, if any, deviation of the tongue or face. The sphincters were at first relaxed, but power was speedily regained over these muscles. There was temporary ptosis, and also pronounced aphasia from the beginning.

Whether at the time of, or shortly after the attack there were tonic or clonic spasms of the limbs, symptoms often observed in lesions of the cortical gray matter, I did not ascertain. At the present time, four years after the attack, the patient presents the appearance of perfect health. There is no paralysis of any kind, and aphasia is noticeable only in an occasional inability to remember a word; but there exists marked amnesic defects in writing, and what is far more serious, he can understand hardly anything he reads, although it becomes perfectly plain when read to him. The character of the onset of the attack in this case, the final and somewhat rapid disappearance of the hemiplegia, the exemption of the face and tongue, the absence of anæsthesia, and the presence of aphasia, all pointed to the cortex as the location of the lesion.

Anæsthesia, it is unnecessary to say, is a very common symptom in hemiplegia, but occasionally we meet with irregular forms of it, where it is out of all proportion to the motor paralysis, and persists after the power of motion is fully regained. I have no records of this condition, but the post-mortems of Turck and the investigations of Veyssière "go to show that complete hemi-anæsthesia may be produced by a considerable lesion just outside of the optic thalamus, involving the peduncular expansion (internal capsule) just at the part where it begins to unfold into the foot of the radiating crown of Reil.

In Turck's cases, injuries in and about this region gave rise to a hemi-anæsthesia which persisted for many months, and even for one or two years after the motor paralysis had almost wholly disappeared." Unilateral hyperæsthesia, on the contrary, is somewhat more common, and in a case of especial interest, that I saw with Dr. J. W. Greene, it was a prominent symptom. The patient was a cashier in one of our banks, and a hard drinker. His right side became suddenly and completely paralyzed, followed by such an acutely sensitive condition of the limbs, that the slightest touch caused great pain.

Taking into consideration the completeness of the paralysis, and the severity of the other symptoms, the case seemed about as unpromising as possible, yet in a few months recovery was approximate if not complete. The treatment was almost entirely electrical, by the methods of general faradization and

central galvanization. I have frequently met him on Broadway, walking with all his former vigor. We do not positively know the cause of this symptom, but it has been suggested that as destruction of one of the sense-centres for common sensibility results in hemi-anæsthesia, so a neighboring lesion, resulting merely in a reflex irritation of this sense-centre, may be followed by hemi-hyperæsthesia.

In all the foregoing cases it is to be presumed that the pathological condition was either rupture or occlusion of vessels. I have made no attempt in this paper to discriminate between the two; indeed, it is no easy matter to do this in many cases, and the differential diagnosis in this respect is, by no means, so important as the regional diagnosis, which has mostly engaged my attention.

There is a third cause of hemiplegia, however, which we understand very little about, but which may be perhaps not quite so infrequent as is generally supposed. I refer to a spasm of the vessels. In the case that came under my observation the attacks were intermittent in character, resulting in partial hemiplegia, which would soon pass away. These attacks extended over several months, and finally resulted in the death of the patient. A post-mortem made at my request by Dr. Henry T. Pierce revealed various abnormal conditions of the brain, but neither rupture nor occlusion of any vessel, and rendered it probable that the cause was functional and spasmodic.* A point of considerable practical interest in the consideration of this case lies in the fact that applications of electricity for the purpose of affecting the vaso-motor system resulted in an immediate cessation of these attacks, which continued from the 25th of September to the 4th of December, when a most violent attack carried him off.

The infrequency with which we meet serious impairment of the function of the nerves of special sense in cases of hemiplegia following brain lesions, renders the subject perhaps of secondary importance. The explanation for this exemption is very much the same as has been offered by Broadbent in the case of motor phenomena, and is perhaps even more conclusive; for the researches of Lockhart Clarke certainly show that the nuclei of the two optic and two auditory nerves respectively are very intimately connected. As a matter of fact we know that not only do ordinary lesions of one hemisphere fail to impair sight, but that almost complete destruction of one hemisphere may leave these functions intact, through the power of the opposite hemisphere to take cognizance of visual impressions. In regard to sight there are some exceptions to this rule of exemption in damage to the hemispheres, but none probably as regards hearing, since the nuclei of the two auditory nerves lie near the junction of the pons with the medulla, and hearing can hardly be impaired without there is either a lesion at this point, an injury near the origin of the nerve trunk, or an incomplete thrombosis of the basilar artery. Sight, on the other hand, may not only be occasionally affected by damage to one hemisphere, but the extent of the optic tract within the cranium, and its varied blood-supply, render it more liable to injury in any form of intracraniat disease than the sense of hearing.

Various local lesions, resulting not only in hemiplegia, but also in total or partial blindness, might be enumerated; but I desire at this time to consider an occasional loss of this function which is only temporary and due probably to indirect or reflex effects of injuries to brain-substance in close proximity to the corpora quadrigemina.

As a parallel to the above we may have, as a result of an epileptic seizure, temporary paralysis of the limbs. One case of this kind, where the paraplegia was complete, and lasting for over twenty-four hours, I have myself seen. In the same way, then, either with or without an epileptic attack, we may have complete loss of sight. It is said that hemiplegia, when associated with this anomaly of temporary blindness, is apt to be preceded by epileptiform convulsions, and in the illustrative case which I have to relate, this was undoubtedly the mode of onset. This case came under my observation some years ago, in the practice of a Dr. William Miller, now deceased, who, although not a regular physician, had, in certain directions, an immense, and perhaps an unparalleled experience. Until within a few years since, I had never reported it,* from the fact that at the time it seemed to me to be entirely exceptional and unexplainable. In the light of subsequent experience, however, the result then noted would seem to be not altogether exceptional, nor devoid of the possibility of rational explanation.

Some years previous the patient, a man in middle life, had suffered from a convulsive seizure, which was, I suppose, epileptic in character, and these at long intervals had been repeated. Two months before he came under my observation, he was prostrated by an epileptiform attack of unusual severity, resulting not only in incomplete paralysis of one side of the body, but a condition also of total blindness. There was in this case a reversal in the order of recovery, for two months after the attack—while the arm had almost wholly regained its normal power, the strength of the leg was still impaired to a considerable degree. An induction current, as powerful as could be well borne, was applied simultaneously to both eyes of the patient for about two minutes, and was followed by an immediate restoration of sight. This result, surprising as it seemed at the time, and almost incredible as it may appear to those who have given the subject no thought, or who have never heard of cases analogous, is, in truth, not so astonishing as it would seem, neither indicating any mysterious power nor novel therapeutic action of the current. Judging from reports of other cases, and the probability of the purely functional or indirect cause of the blindness, recovery would probably have taken place spontaneously, and was only hastened by the reflex stimulation of the electricity.

The length of time during which sight was lost in this instance would seem to be exceedingly rare, for among a number of cases mentioned by Bastian,† he refers to one in which the blindness "lasted for an unusual time—as long as six weeks." This patient, while in apparently perfect health, had several attacks of numbness in the left arm, which finally resulted in almost complete loss of power, and at the same time left him so totally blind that he was unable to see daylight.

The recovery of sight was rapid, and continued permanent. If we attempt to explain the interesting phenomena of the sudden and total loss of sight and its sudden recovery on the theory of indirect or

* This case will be found in the New York Medical Journal, September, 1877.

* Virginia Medical Monthly, September 18, 1878.
† Paralysis from Brain Lesions, p. 116.

reflex influences, some might suggest that, in the light of a better knowledge of cerebral physiology and pathology, these views are not received with the same favor as formerly. It must not be forgotten, however, that morbid anatomy is as yet far from being co-extensive with pathology. The most profound derangements of the functional activity of the nerve-centres may exist, and yet by none of our advanced methods of investigation has it been possible to discover any appreciable lesion; and until we have more accurate knowledge in this direction, the theory of reflex influences, on which we must fall back for explanation, although beyond the sphere of absolute verification, is, at all events, plausible and, to a certain extent, rational.

THE DELIRIUM OF SALICYLIC ACID.

By CHAS. C. BARROWS, M.D.,

ACTING ASSISTANT SURGEON U. S. ARMY, LATE HOUSE PHYSICIAN TO BELLEVUE HOSPITAL.

THERE are few writers on salicylic acid who fail to give an account of the milder cerebral symptoms which accompany its administration, such as tinnitus aurium, headache, deafness, etc.; and the number is equally small of those who do mention the more serious cerebral complication, namely *delirium*, more or less active and violent. Ewald, quoted by Still6 and Maisch in *The National Dispensatory* (1879), gives the best account of it that I have been able to find.

That in a large proportion of cases of acute articular rheumatism the pain, heat, and swelling of the joints will completely disappear within forty-eight hours, or soon thereafter, under the free use of salicylic acid or its salts, is a fact in therapeutics now well established. But that this drug, in exactly similar cases, may set up a violent and alarming form of delirium, does not seem to be so generally known, at least to the average practitioner. The meagreness of our current literature on this subject, as well as the want of information in regard to it in those books on therapeutics which have come under my notice, has led me to report the following cases which were under my care while recently house physician to Bellevue Hospital. To my associates in the hospital there will be nothing new in this paper, for such cases were as common in their wards as in those of which I had charge; but to the average general practitioner I trust it may contain something of interest.

CASE I.—Mary Brennan, aged thirty, a native of England, married, was admitted to Ward 50, Bellevue Hospital, May 24, 1881, suffering from an attack of acute articular rheumatism of two weeks' standing. No cardiac complications. Patient is six months advanced in her sixth pregnancy. Ordered acidi salicylici, gr. xx., q. 2 h.

May 26th.—Patient became wildly delirious last night, in consequence of which all treatment was stopped. Is rational this morning, but very deaf and stupid. Ordered alkaline treatment.

May 30th.—The rheumatic symptoms increased so markedly when the salicylic acid was stopped, that it was renewed yesterday, and opiates given, with the hope of preventing a return of the delirium.

June 1st.—Patient is very deaf, but not delirious. Joints are not so painful.

June 3d.—Patient vomited the salicylic acid mixture yesterday, and it was stopped. It is begun again this morning.

June 6th.—Again delirious last night. Salicylic acid discontinued. No delirium this morning.

August 22d.—This patient, after having tried every form of treatment with but little benefit, was to-day discharged at her own request, both wrists and one knee being still swollen, painful, and so stiff as scarcely to admit of motion of the leg or hands. The salicylic acid has been tried again several times since the last note, and was each time followed by delirium, which subsided as soon as it was discontinued. Between June 11th and 14th she suffered from a very severe acute laryngitis, a complication which is by no means rare with these cases. This was relieved by inhalations of steam with vinegar. On July 14th she began to have labor pains, and examination revealed a transverse presentation. The child, which had been dead for a week or more, was delivered by turning without difficulty.

CASE II.—Mary Boylan, aged forty four, a native of Ireland, married, was admitted to Ward 50, Bellevue Hospital, September 20, 1881, with acute articular rheumatism of several days' standing. Second attack. No cardiac complications. Ordered acidi salicylici, gr. xx., q. 2 h.

September 21st.—Pain much less severe; some dizziness and tinnitus aurium. Ordered potassii bromidi, gr. xx., q. 4 h., and acidi salicylici, gr. xv., q. 2 h., continued.

September 23d.—Patient is very cross and is delirious. Salicylic acid stopped and potassium bromide continued.

September 27th.—Delirium has subsided. Patient still complains of some pain in one knee, but is able to be up and about. She was subsequently discharged cured, without farther treatment.

CASE III.—John Sullivan, aged eleven, a native of Ireland, was admitted to Ward 50, Bellevue Hospital, June 18, 1881. The boy, a well-nourished, bright, healthy-looking little fellow, states, on admission, that he had rheumatism several years ago, from which he soon recovered, and that he has been well from that time until four days ago, when he began to suffer from pain and swelling in his ankles and knees. He thinks he has had some fever, and has, since the beginning of his illness, suffered from shortness of breath. He has had no pain in his chest. Examination shows heat, tenderness, and swelling of both knees. Auscultation reveals a soft, blowing, systolic murmur at the apex of the heart, not transmitted in any direction. Ordered acidi salicylici, gr. x., q. 3 h.

June 10th.—After six doses (℥ j.) of the acid had been given, the patient became delirious. This morning the rheumatic symptoms have entirely disappeared, but the patient is wildly delirious. He insists that his bed is filled with cockroaches, and that the floor around it is covered with fire-crackers, which are continually exploding. His efforts to escape both imaginary sources of annoyance are extremely ludicrous. Ordered salicylic acid stopped, and potassii bromidi, gr. x., to be given every three hours, until the delirium shall cease.

June 20th.—Patient is rational and quiet this morning, and has very little pain. The swelling is subsiding. The heart-murmur is still heard.

July 3d.—The boy has convalesced satisfactorily since last note, and is to-day discharged cured, the heart-murmur having disappeared.

CASE IV.—Mary Abrey, aged thirty-seven, a native of Germany, single, was admitted to Ward 50, Bellevue Hospital, May 28, 1881, with her fifth attack of acute articular rheumatism, from which attack she

had been suffering two weeks. Ordered acidi salicylici, gr. xv., q. 2 h.

May 30th.—No improvement. A pericardial friction-sound is heard over the base of the heart.

June 1st.—Patient says she feels worse, and has more pain. Is very deaf. Pericardial friction-sound is very loud.

June 3d.—Patient has not improved at all under the salicylic acid. She is wildly delirious, and is laboring under the delusion that some operation is to be performed on her. As she threatens the nurses and patients around her, she has to be restrained forcibly. Salicylic acid stopped.

June 6th.—Patient has become very quiet, and makes very little complaint. She is dull and stupid, and will not answer questions.

July 17th.—Under the use of potassium iodide the patient recovered within a few days after the last note, and worked about the ward until to-day, when she eloped.

Case V.—Susan Maswell, aged thirty-one, a native of Ireland, was admitted to Ward 50, Bellevue Hospital, June 8, 1881. She gives, on admission, a history of acute rheumatism, dating back two weeks, and affecting almost all the large joints. Examination shows tenderness, swelling, heat, and redness of the left elbow and wrist. No cardiac complications found. Ordered acidi salicylici, gr. xx., q. 2 h.

June 11th.—Patient was actively delirious last night. Salicylic acid stopped.

June 17th.—Delirium has disappeared, and patient has improved rapidly since last note, and is to-day discharged cured.

Case VI.—Anna Ricaumandis, aged thirty-five, a native of the United States, married, was admitted to Ward 50, Bellevue Hospital, May 5, 1881. Has suffered from acute rheumatism of the knees, ankles, elbows, and wrists for three weeks. No cardiac complication can be made out. Ordered acidi salicylici, gr. xx., q. 2 h.

May 6th.—This evening the patient became violently delirious, and so noisy that she had to be removed from the ward to a room in the Pavilion for the Insane attached to the hospital. Salicylic acid stopped.

May 7th.—Patient is quiet and rational this morning. She complains of pain in her lower limbs, but the joints are not swollen nor tender.

She was transferred to Ward 23, and subsequently left the hospital cured.

Case VII.—Timothy McAuliffe, aged fifty, a native of Ireland, married, was admitted to Ward 6, Bellevue Hospital, August 24, 1881. The patient has been suffering from acute rheumatism of several joints for the past month. This is his third attack. He has no cardiac symptoms. Ordered acidi salicylici, gr. xx., q. 2 h.

August 26th.—Pains have disappeared, but the patient is deaf and has some tinnitus aurium.

August 27th.—Patient was delirious last night, and is excitable and very deaf to-day. Has no pain. Salicylic acid stopped.

September 10th.—Patient has had several returns of the pain and swelling, which were relieved by the salicylic acid combined with potassium bromide. He has had no return of the delirium, and is now well of his rheumatism.

Case VIII.—Henry Seymour, aged twenty-eight, a native of the United States, was admitted to Ward 6, Bellevue Hospital, August 11, 1881, suffering from acute rheumatism of one week's standing. No cardiac symptoms. Ordered acidi salicylici, gr. xx., q. 2 h.

August 15th.—Patient has no more pain in his joints, but complains of deafness and "confusion in his head." He has been delirious.

August 16th.—Patient has a severe laryngitis. Salicylic acid stopped and potassium bromide and chloral hydrate ordered, as the patient is still delirious.

August 19th.—Patient is no longer delirious.

August 25th.—Patient has improved steadily since the last note, and is to-day discharged cured.

In my case-books I have recorded the histories of twenty-eight cases of acute rheumatism treated with salicylic acid, with the development of delirium in the eight cases which I have presented above. This large proportion—almost one-third of the cases so treated—may perhaps be accounted for by the liberal, some may say heroic, manner in which the drug was administered. The following combination, which I find agrees with the stomach better than any other I have seen, was used in every case:

℞ Acidi salicylici ..... ℥ ss.
Sodii bicarbonatis ..... q. s.
Syr. zingiberis ..... ℥ ij.
Aquæ ..... q. s. ad. ℥ vi.
M.—S. ℥ ss. = gr. xx.

In Case III., that of the boy, ʒ ij. of the mixture (= gr. x. of the acid) were given every three hours.

The delirium in all of these cases resembled very closely that of acute alcoholismus. This resemblance is particularly well illustrated in the case of the boy (III.), whose illusions and hallucinations were strikingly similar to those of delirium tremens. In every case the delirium subsided quickly when the exciting cause was removed—in some without further medication, in others under the use of opiates or the bromides. Since I am free to confess that I am ignorant as to the manner of action of salicylic acid, I shall not attempt to speculate or theorize on the reason why it produces delirium, the only object of this paper being to bear testimony to the fact that it is the direct cause of the delirium which at times accompanies its administration.

Willet's Point, N. Y. H., March 27, 1882.

Resection of the Stomach.—The operation for resection of the stomach is one at once so bold and radical, that a certain fascination attaches to it. Surgeons seem loath to give it up, however unfavorable the results so far have been. In Culm, Dr. Rydygier, on November 21st, operated upon a woman who was suffering from cancerous stricture of the pylorus. The patient has, up to the present time, done well. This, according to the *Allgemeine medicinischen Central-Zeitung*, makes eight cases in all of this operation. Five of these were operations performed by Billroth. Three of the cases died almost immediately; one died three months later, from a return of the growth. One has now been living for three months, and appears to be in good health. Dr. Wölfer's patient was operated on in April, 1881, and at last accounts was doing well. In July, 1881, Kitajewsky operated upon a woman with cancerous stomach. She was very weak at the time, and died six hours after the operation.

The operation for resection was first proposed and described by Merrem in 1810, but no one ventured to adopt his suggestion. As the result of experiments upon lower animals by Pean, Rydygier, and others, Billroth ventured to extirpate the pylorus in January, 1881.

Reports of Hospitals.

MANHATTAN EYE AND EAR HOSPITAL.

THE following interesting cases were seen in the service of Dr. D. B. St. JOHN ROOSA, one of the visiting surgeons :

SENILE CATARACT—INFLAMMATORY DEPOSIT IN THE PUPIL—CORNEAL SECTION—ANÆSTHETICS—DATE OF OPENING THE EYE.

Miss H——, seventy-two years of age, came in with ordinary senile cataract in both eyes. Eight weeks ago Dr. Roosa operated upon the right eye, performing the ordinary cataract operation known as Graefe's, making an upward section of the cornea and an iridectomy. When the eye was opened late, from four to six days after the operation being the rule, he found that the pupil was entirely obscured, although there was nothing in either the operation or the subsequent history of the case to account for it. There had been no pain, there was no undue tenderness, and yet the pupil was blocked up with inflammatory material, which remained so long that he thought it better to operate on the other eye than to wait until the eye already operated upon was ready for needling. The left eye was accordingly operated upon, and, when opened, the history of the right eye was repeated, as this pupil also was blocked up with inflammatory deposit. But in a few days the right eye began to clear up, soon afterward the left, and she had finally very comfortable vision, and was ready to be discharged. Before the operation she was myopic, and now wears glasses with 6½ inch focal distance, which give her vision of $\frac{20}{100}$ +. She had sight enough to read coarse type, No. 4 Jaeger. There was nothing special concerning the management of the case, except that Dr. Roosa agreed with Dr. Derby, of Boston, and did not open eyes early upon which cataract operation had been performed. He did not agree with Dr. Derby, however, concerning the non-use of anæsthetics when the operation was performed. He makes no incision in the sclerotica. He thinks, and has always thought, that a wound of the sclerotic is much more serious than a corneal wound, and therefore made the incision in the cornea entirely, even when the Graefe operation was first suggested.

SENILE CATARACT—ESCAPE OF THE LENS IN ITS CAPSULE—THE FLANNEL BANDAGE—LIGHT IN OPHTHALMIC DISEASE.

Mrs. Q——, sixty-five years of age, had senile cataract fully developed in the right eye, and in the left eye only partially developed, looking, under atropia, like a wheel with a good hub and short spokes. Dr. Roosa operated upon the right eye ten days ago. After making the ordinary section he found that the lens was ready to escape in its capsule, and therefore he did not divide the capsule; that is, the entire lens came without opening into the capsule. He regarded that as a great desideratum, and could he devise a method which was not dangerous, he would remove every lens in its capsule.

He regarded the loss of vitreous as one of the worst things which could occur, as choroiditis and hyalitis were apt to follow and destroy the eye months after it was thought that a cure had been effected. In this case the lens came out without the escape of vitreous. Afterward an iridectomy was performed. The patient has done very well. She had not had the subjective symptoms of iritis, although the disease was present as indicated by the watery condition of the eye and the slight tenderness of the globe. Dr. Roosa still clings to the use of the flannel bandage, suggested by Graefe, for ten to fourteen days after the operation, and then he applies a shade, and glasses if the condition of the eye admits.

There has been a great advance made in ophthalmology in one respect. In former times the greatest pains were taken *not* to admit a ray of light to the patient's room, but nowadays the surgeon is contented with a moderate darkness and the protective bandage is considered as sufficient. The popular opinion is exaggerated concerning the necessity of darkness in the management of ophthalmic disease.

On examination of the eye, a good black pupil was found, the wound had healed perfectly and smoothly, and the eye was a little watery and there was slight redness. Her vision was sufficient to count fingers, and she saw objects well. Vision was tested only sufficient to determine what was going on inside of the eye.

SENILE CATARACT—DELAYED UNION OF THE CORNEAL FLAP—SECONDARY OPERATION—FAILURE.

Nancy ——, seventy-five years of age, had an operation upon her right eye well performed by an ophthalmic surgeon, but unsuccessfully. Dr. Roosa operated upon the left eye but the patient had not recovered any great amount of vision. The upward section was made, the flap was small, and, the first time the eye was opened, it was found that it had not united and there was bulging which continued for some time. Union finally occurred, but it did not leave the pupil thoroughly black. She had blepharitis of the most marked kind at the beginning of the operation, and that had been one of the factors which had contributed to lack of success in both eyes. Ten days ago he performed iridectomy in order to see if some sight could not be obtained from this, and he finally succeeded with difficulty in removing a piece of the iris.

The blepharitis was nearly cured, and there was excellent perception as the result. Improvement probably would occur, and there was yet a chance that the patient might get sight sufficient to enable her to go about the room alone.

IRIDECTOMY—SYMPATHETIC INFLAMMATION.

A young woman who had lost one eye by suppuration of the globe, had had a perforating ulcer of the cornea of the fellow, with a scar so situated as to prevent vision. Dr. Roosa made an opening in the iris below, and with good result. But she was having pain in the atrophic eye, and there was sensitiveness in the eye operated upon, accompanied by lachrymation. Unless improvement began very soon, extirpation of the atrophied globe would be performed. In the meantime hot water, long used in ophthalmic practice, was to be applied every hour, until the pain and sensitiveness had had time to subside.

CONGENITAL CATARACT—GOOD PERCEPTION OF LIGHT—NEEDLING—ABILITY TO RECOGNIZE OBJECTS.

Gilbert ——, eleven years of age; born blind; was brought to the hospital two weeks ago. Both lenses were opaque. The iris in each eye was of good color,

movable, and he has excellent perception of light. Both lenses were very white, but the left whiter than the right. While it was thought that the lenses were still undergoing degeneration, it was not supposed that they were mere shells. Ten days ago the right eye was operated upon by needling, the proposition being to make a hole in the lens, break it up somewhat, and leave it to be absorbed. The moment, however, the needle was introduced, it was found that it entered a material like syllabub. There was not much reaction after the operation, such as may arise (1) from iritis, and (2) irritation produced by swollen lens-material, the latter being the most dangerous.

On examination, it was seen that he had nystagmus, which came from never having had any good point of fixation from which he could see well. A black pupil could be seen in the right eye, with some white material in the lower part of it. His central development was of the average character, and it remained to be determined whether or not he had a sound retina, optic nerve, etc. It was inferred that they were in good condition, because the boy's perception of light was so good, and still further, that since the operation he could recognize objects.

An ophthalmoscopic examination would be made as soon as the condition of the eye would admit. The patient, of course, was like an infant, did not know how to see, and it was with great difficulty that it could be positively ascertained that he did actually see objects. To teach him to see would be a work of patient training continued for months, perhaps years. He should have been operated upon under two years of age, from then to six months old, being the time usually selected as that which gives the most favorable results. This patient is learning colors. He now recognizes black, white, blue, and red.

TRAUMATIC CATARACT—CLOSED PUPIL—INFLAMMATION OF THE VITREOUS—LORING'S METHOD OF IRIDOTOMY —RESTORATION OF VISION.

This young woman, twenty-two years of age, came to the hospital three years ago. When admitted she came for an operation for closed pupil, the result of iritis not treated by atropine, as was found out by Dr. John H. Hinton, who sent the patient for treatment. The pupil was closed, the iris was glued to the capsule, and she had secondary cataract. With great difficulty a piece of the iris was removed by cutting into it and tearing it out, and that operation was repeated seven times. At first, as well described by Stellwag, the space made by removing the portion of iris was quickly filled up with new products, and apparently the eyes were no better off than at the beginning. But in this case they were improved, and in October, 1881, Dr. Roosa performed the seventh operation. It consisted in using Dr. Loring's knife—having gotten rid of most of the lens by the six previous operations and its place having been taken by new plastic material—introducing it as Dr. L. had recommended, passing it through the anterior chamber as for Graefe's operation, and then lifting it very high so that it stood almost vertical, and cutting through the entire vitreous humor with one broad sweep. It is an operation applicable only to desperate cases, in which the lens has given place to connective tissue and the vitreous is probably inflamed, and there remains perception of light. The object, then, is to get through this connective tissue, and if the vitreous cells are not opaque all the way down a result may be obtained, because the vitreous will ooze between the edges of the opening. Keep them separate, and after the first inflammatory reaction has passed away, there will remain a clear layer of material to the rods and cone, which, in this case, were sound. From the beginning, the prognosis was bad in the case before us, but the patient urged operation after operation, and the final result was a vision of $\frac{5}{70}$ for distance, ability to read Jaeger's number 14, to go about alone, to distinguish men from women; in short, had been rescued from blindness. The case was interesting and remarkable on account of the years during which seven operations were performed, and instructive as showing the advantage of Dr. Loring's method of iridotomy, which, though bold, was regarded as the only one that would do any good in advanced cases. The after-treatment was simply the application of cold, sometimes the bandage, sometimes not, and moderate exclusion of light. After several of the operations the reaction was very severe. More than all, the case was interesting as showing a good result obtained under the most unfavorable conditions, so far as the eye was concerned, the surgeon being aided by the great faith and persistent fortitude of the patient.

Progress of Medical Science.

OSLER ON THE BRAINS OF CRIMINALS.—Professor William Osler, of Montreal, has been examining a number of brains with the view of seeing whether or not he could confirm the statements of Benedikt that in criminals the brain is atypical and to be regarded as different from the average human species in the cultured races, the special points of variation being in the conformation of certain gyri and fissures. Thus, he claims for the criminal brain a confluence of many primary fissures, and also the existence of four horizontal convolutions. He bases his studies upon thirty-eight hemispheres taken from twenty-two criminals. Dr. Osler has carefully examined sixty-three hemispheres from thirty-four individuals, all of whom were patients in the Montreal General Hospital, and probably good examples of the class from which the hospital wards are regularly recruited. In addition, he obtained the brains of two murderers and studied them with reference to the same points. Giacomini's method of preservation was employed.

His conclusions are interesting as bearing on the question in both respects. Thus while in one of the criminals, and in nine of the hospital cases, he found four frontal gyri as subdivisions of the first frontal convolutions, in the hospital cases an equal proportion exhibited the confluent fissure type, though there was a less number of unions between typical fissures than in Benedikt's cases. He accordingly thinks it more reasonable not to assign any special significance to these conditions until the arrangement of the convolutions in the various races has been more thoroughly studied, since it may prove that the race rather than the cerebral organization governs the peculiar conformation. — *Can. Med. and Surg. Jour.*, February, 1882.

HART ON THE PROPAGATION OF TYPHOID, SCARLATINA, AND DIPHTHERIA BY MILK.—Mr. Ernest Hart, of London, has recently given a tabular review of seventy-one epidemics that have been attributed to

infected milk. Three diseases he recognizes as capable of being so propagated, and they are typhoid fever, scarlatina, and diphtheria. At the same time that he limits the agency of milk to this small number of diseases, the probability of others, that are cognate, being conveyed by the same medium is thought to be strongly indicated. The total number of cases in the epidemics is stated to have been in round numbers: for typhoid, 35,000; for scarlet fever, 800; and for diphtheria, 500. Though at first much scepticism prevailed about this peculiar method of disseminating infection, Mr. Hart thinks that now its acceptance as a fact is practically demonstrated. He freely admits that the proof of the contamination could not be shown in every epidemic, but this is held to be immaterial, the records showing unmistakably that there was an incidence of disease upon the customers of a particular dairy, where their neighbors in the vicinity, living under otherwise similar conditions, escaped wholly or in great part.

As regards typhoid fever, the milk was more commonly poisoned by the soakage of the specific matter of typhoid excrement into the well-water used for washing the milk cans, perhaps by the actual dilution of the milk with the tainted water. Other ways in which the careless or filthy habits of the milkers, who at the same time were attendants at the sick-bed of typhoid patients, could accidentally soil the cans, the milk, or the water, naturally suggest themselves. In the matter of scarlatina, it was found that in the majority of instances persons employed about the dairy were at the same time caring for persons ill of scarlatina, and the ease with which the branny dust of the disease could find access to the milk is readily recognized. In diphtheria the matter was wrapped in some obscurity. Prior to 1878, it had not been suspected that the infection could be communicated by milk, but since that time Mr. Power had traced six epidemics to this source, and yet in each instance the exciting cause was never made clear. As a deduction from this very important *résumé*, the regulation and inspection of milk farms and depots are strongly urged upon the notice of legislative bodies.—*Trans. of Internat. Med. Congress*, vol. iv., 1881.

Acute Traumatic Tetanus Successfully Treated by Chloral and Iodide of Potassium.—Mr. J. H. Salter contributes another case to the increasing list of successes by the combined use of the bromide and chloral. A laborer, aged fifty-one, smashed the little finger of his right hand, and subsequently treated it first by poultices, and later by water dressings. After a period of some seven weeks general spasms began to manifest themselves at short intervals, the flexors of his trunk and extremities being involved, while the jaw became fixed. Temperature normal. Chloral and bromide of potassium were then given him every two hours, the former in ten-grain, the latter in fifteen-grain doses, with, in addition, from fifteen to thirty grains of chloral hypodermically, this latter procedure having a very marked effect. Decided improvement was not noted for twenty days, but from that period on was satisfactory. The man is now entirely well and working daily. During the period of twenty days he took two hundred and forty grains of the bromide and one hundred and eighty of chloral per day, the total amount given during the time being of chloral sixty drachms, and of the bromide eighty drachms or thereabouts.—*The Practitioner*, February, 1882.

Papillary Growths in the Bladder Scraped Off by the Finger.—Dr. W. F. Atlee, of Philadelphia, has reported a rare case of excrescences in the female bladder which he has successfully removed in a very simple way. An unmarried lady, nineteen years of age, consulted him in the summer of 1880, describing symptoms of pain in passing water, which, originating in early life, had increased with her years, until at seventeen she suffered severely during each act of micturition. At eighteen she had pus in the urine, and sometimes blood, and often was confined to her bed for some months. Dr. A., having anæsthetized his patient, dilated the urethra with dressing forceps and then passed his fingers into the bladder. He found no foreign bodies, but at the fundus a collection of papillary growths, some more than half an inch in length and about a line in thickness. Finding them soft and yielding, he used his finger and finger nail, and removed them all thoroughly. Since that time the patient has had no untoward symptoms, and the case is reported as one of radical cure. Attention is called to the fact that in the systematic text-books the treatment recommended is usually palliative, whereas a permanent cure can be easily accomplished with comparatively little risk to the patient. —*Bost. Med. and Surg. Journal*, March 30, 1882.

Nitro-Glycerine in the Treatment of Heart Disease.—Mr. W. E. Green, of the Isle of Wight, finds that this comparatively new remedy has a field of usefulness that is hardly less extensive than digitalis. He uses it in the form of a one per cent. solution in alcohol, one minim being the initial dose, though occasionally a less quantity may be sufficient to produce the physiological effect. This consists in a paralysis of the vaso-motor nerves. In consequence the face flushes, the temples throb, and the pulse becomes dicrotic and much quickened. In some cases the head aches violently, but in others there is merely a sense of fulness and pain across the forehead, which lessens with each subsequent dose until ultimately there is no unpleasant effect, but rather a sensation of warmth all over the body. At first there may be even a little nausea. Rarely the quantity may be increased, so that fifteen or twenty minims will be administered every four hours. This peculiar effect is not so rapid in its development as in the case of amyl nitrite, but it continues from four to six hours. Mr. Green finds it specially indicated in angina pectoris and in weak, fatty, and dilated hearts, and cites a number of illustrative instances from his individual experience.—*The Practitioner*, February, 1882.

Diphtheria in Calves Communicated to Pigs.—Mr. Cole, a veterinary surgeon, of Hinckley, in Australia, has published the following illustration of the way in which diphtheria may be communicated from one of the domestic animals to another of a different species, thus indicating special sources from which the human disease may at times be contracted.

A calf, about five months old, was found to be dying with some symptoms of a throat disorder, and instructions were given to have the body buried, which through some neglect was not done immediately, so that a sow which managed to get access to the enclosure, attacked the diseased meat and ate some of it. This circumstance came to be known when, a few days later, some of the pigs were taken down with throat disease. Eventually the sow and her young pigs were also victims. These latter died

within twenty-four hours, while the others, including a boar, recovered entirely. Apropos of this outbreak among domestic animals an account is given of an epidemic that occurred in the Oakleigh police station, the disease being, on this occasion, traced to a diseased cow, whose milk had been used by the inmates of the station.—*Australian Veterinary Journal*, February, 1882.

Statistics as to Penetrating Wounds of the Chest.—Dr. de Santi, in studying the medical records of great campaigns, particularly during this century, and utilizing the figures of Guthrie, Menière, Chenu, Laeffler, Stromeyer, Otis and Beck more especially, has found that the numerical relations between wounds of the chest and other parts of the body has not altered since 1814, but that the ratio between penetrating and non-penetrating wounds of the chest has constantly increased. Still at the same time there has been a notable diminution in the gravity of chest wounds, which latter circumstance he would ascribe to the alterations which fire-arms have latterly undergone.—*Archives Gén. de Med.*, March, 1882.

The Physiological Action of the Rattlesnake-Virus and its Antagonists.—Dr. Isaac Ott, following out a line of investigation instituted by Drs. S. Weir Mitchell, of this country, and Sir Joseph Fahrer, of England, has studied the circulatory phenomena to be observed after an animal has been the victim of snake-bite. He employed four rabbits for his first series of experiments, and having applied Ludwig's kymographion as soon as possible after the virus had been instilled, made notes of the arterial pressure and pulse-rate. He concluded from these observations that the rattlesnake-poison kills by producing a failure of the heart, and by diminishing arterial tension. Subsequently, in a second series of seven cases, ammonia, alcohol, and digitalis were given to counteract the poison, and they were found to exalt arterial tension. Ammonia and alcohol also increased the pulse-rate, while on the other hand digitalis slowed it. Toward the close of life excessive stimulation by these same reagents rapidly exhausted the cardiac irritability.—*Archives of Medicine*, April, 1882.

Simultaneous Occurrence of Measles and Scarlatina in the Same Individual.—During the last ten years a number of instances have been reported in which two or more infective diseases have appeared in conjunction, Barthiez-Rilliet being credited with first recording the combination of measles and scarlatina, while Klein, in 1877, reported a case of the triple combination, scarlatina, measles, and varicella. Of the first category an instance is now furnished by Herzog, of Gratz. H. R——, a lad eight years of age, experienced the usual prodromal malaise of the exanthematic fevers and then complained of sore throat, nausea, and had some fever. Within twenty-four hours an eruption appeared upon the head and neck, and the temperature rose to 102° F.; pulse, 120. Slight bronchitis and conjunctivitis. On the second day this eruption began to fade, but on the following a new scarlatinal efflorescence was manifested on the body. The spleen was now somewhat enlarged and the sore throat became worse, while the bronchitis diminished. The throat difficulty increased to such a degree that there was great difficulty in swallowing. There was also severe thirst. Temperature, 104°; pulse, 130. The eruption continued to spread over the lower extremities, while the measly eruption above was scaling. On the next day the scarlatinal efflorescence began to fade. The treatment was chiefly by quinine, and convalescence occurred without any serious drawback.—*Berl. Klin. Woch.*, 7, 1882.

Two Cases of Poisoning by Boracic Acid.—Boracic acid solutions are now used so often, that the following cases, reported by Dr. Molodenkoff (*Vratsch*, No. 3), are of especial interest, in so far as they demonstrate a possible danger that is not generally known. In the first, a chest had been tapped for pleuritic exudation and the cavity irrigated for nearly an hour with a five per cent. solution of boracic acid, until the returning fluid became perfectly clear; it was then discontinued, but a little of the solution was intentionally left within the body. Shortly after this, the patient began to suffer from nausea, which developed toward night into severe vomiting. On the following day the pulse became very rapid, easily compressible, vomiting continued, and the patient had hiccough. During the night the patient's face was suffused by an erythematous rash, which extended on the next day all over the trunk. The vomiting and hiccough continued and the pulse was hardly perceptible; prostration became extreme, though the mind remained clear. On the following day (the fourth) the rash extended to the extremities and the vomiting continued. There was hardly any pulse, though the respirations were normal. Obscured vision was another symptom. Toward evening he became comatose and died. In the second case the poisoning became apparent after the washing out of a cold abscess, and, as in the previous case, some of the solution was left in the cavity. The symptoms were essentially the same, viz., nausea, vomiting, hiccough, cardiac paresis, and prostration. There was also some rise of temperature, but the erythematous rash affected the eyelids only. The patient died in collapse on the third day. An autopsy revealed nothing of special interest, except small extravasations in the pericardium and on the surface of the left ventricle and auricle. Stimulants were freely used, but without any benefit. As a natural inference from the history of these cases, solutions of the acid used for irrigation should not be left in the cavities of the body, as toxic symptoms are said to have never manifested themselves except under these circumstances.

The Use of Continued Tepid Baths in Typhoid Fever.—Dr. Afanassieff, following the example of Riess, has adopted this mode of treatment in seven cases of typhoid fever, of which two were quite severe. Each patient received two baths daily of three hours' duration, the temperature of the water varying from 88° F. to 96° F. Their action on the course of the disease was thought to be beneficial. None of the patients developed the typhoid state, but their minds remained clear. There was either no headache or it was very slight, and the patients slept well, and their appetites were retained during the entire sickness. Pain in the iliac fossa and tympanites were present, but they did not call for any active interference. The fever in most cases was materially influenced by these baths, the temperature falling from 3° to 6° F. The effects were more marked toward the close of the disease, and in the evening more than in the morning. The pulse invariably grew stronger and fuller, its frequency diminishing by twenty to thirty beats per minute.—*Vratsch*, No. 51.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, April 29, 1882.

THE TREATMENT OF TYPHOID FEVER IN THE PAST FOUR YEARS.

A REVIEW of the literature covering the subject of typhoid fever since 1878 is communicated to Schmidt's *Jahrbücher* by Dr. Arthur Geissler. It is interesting to note that a very large proportion of this literature is devoted to the subject of etiology and prophylaxis. Too much, indeed, is said to permit of any adequate criticism of it here. The subject of therapeutics of the disease occupies a much less space. Indeed, considering the extensive prevalence of the disease and the mortality therefrom (four per 100,000 inhabitants in German cities), the question as to how it is best to be dealt with by the physician has received surprisingly little attention.

In the articles that have been contributed we find that the measures recommended may be classed under three heads—the antipyretic treatment, the antiseptic treatment, and miscellaneous methods. The antipyretic treatment still excites the most discussion. In Germany it means the use of baths, of quinine, and of salicylic acid. In this country other means of cooling the body than baths are often resorted to, the most frequent being probably sponge-bathing. It is noticeable that there is very little literature regarding the efficacy of baths, and Geissler states that in German hospitals the mortality from typhoid fever has considerably increased since eight years ago. In 1877 it was 12.8 per cent. among 10,901 cases; in 1878 it was 13.5 per cent. among 12,406. In the years 1879–81 the figures are still more unfavorable. In Dresden, between the years 1850 and 1870, before the antipyretic treatment was introduced, the mortality was 12.6 per cent. among 3,387.

Those authors who have written recently upon this subject continue for the most part still to recommend it, but not with the exaggerated praise heard eight years ago. A. Vogel had a mortality of one in seventy cases treated with baths; Morf speaks guardedly regarding their employment; Henoch and Asby all caution against frequent cold baths for children; Keulich is enthusiastic over wet-packs combined with systematic high feeding; Steffin was only moderately successful with wet-packs; Zenetti advocates Ziemssen's treatment with calomel, baths, and quinine.

One finds little said about the antipyretic value of quinine. There has been a tendency to substitute salicylic acid for it, but the results obtained seem discouraging. Of five authors who report their experience only one advocates its use. The drug in large doses reduces temperature, but its action is temporary, and it is likely to weaken the heart and disturb digestion. Hallopeau and a few others think that by alternating salicylic acid with quinine better results are obtained.

A survey of the recent literature collected by Geissler upon the antipyretic treatment of typhoid fever leads to the impression that the roseate views once entertained for it are not being justified. Certainly no American statistics have been collected which show positively that the treatment by baths or by large doses of quinine has any real influence upon the mortality in American typhoid. The measure seems to be helpful in some cases. That is all that can be said.

We referred some time ago to the antiseptic treatment of typhoid fever advocated by Roth. Dr. B. Bell claims good results from a similar method, in which he uses eucalyptus. But the antiseptic treatment, as a special remedial method, has as yet no solid basis.

The "water-diet" treatment, strenuously advocated by Dr. Luton, of Rheims, has a curious interest only. He gives his patients only cold water, but this in large quantity, for the first four or eight days. In this way he "washes out" all the disease-germs from the bowels and the blood. Whether he cures his patients may be considered doubtful.

The medical profession cannot be said to have yet formulated a treatment for enteric fever which receives any unanimous adoption. This is not to our credit, for it is very largely due to the fact that we do not work as a body, and our individual experiences are not therefore utilized.

THE MURDER OF JENNIE CRAMER.

THE trial for the supposed murder of Jennie Cramer was begun last week. The case promises to be of some medico legal interest. The unfortunate girl, it will be remembered, was found lying dead near the water last summer. It was thought at first that she was drowned, but this was disproved. It is now claimed by the prosecution that she was killed by the administration of arsenic. This view when first advanced seemed to be entirely contra-

dicted by the fact that there was no evidence of corrosion or irritation of the stomach, and by the fact that only a very small amount of arsenic was found in the body. Recently the tissues have been re-examined, and a larger amount of arsenic is said to have been found. We are told, also, that the prosecution has engaged an expert who will testify that a fatal dose of arsenic can be taken without its seriously affecting the stomach mucous membrane. We cannot say that such a thing is impossible. But it would be outrageous to hang a man upon anything so improbable. The prosecution may, however, be able to produce other corroborative evidence.

THE COMMUNICATION OF CONTAGIOUS DISEASES BY BOVINE VIRUS.

The widespread use of bovine virus in this and other countries makes the question of its safety and efficiency a most important one. The National Board of Health has had a number of the large vaccine farms examined and reported upon by inspectors. As a rule, the vaccinations seem to be done with care upon healthy cattle, and in clean stables. But this is not uniformly the case.

It is noticeable, furthermore, that if the vaccinated surface of the calf gets dirty, inflammation is liable to set in. A clean skin seems to be necessary for a typically good course of the disease in the cow as well as in man. To secure this, a piece of canvas, to protect the vaccinated surface, is used at some establishments.

A point of no little importance, dwelt upon by Dr. James Law, is whether the vaccine lymph should be gathered on the seventh or eighth day. At Dr. Griffith's establishment, in Brooklyn, the lymph is taken on the seventh day, although it is believed that more could be obtained on the eighth. But in microscopic examinations of the lymph it is claimed that up to the end of the former period the fluid contains merely the minute granules or micrococci supposed to characterize vaccine virus. On the other hand, from the eighth day onward there are superadded granule corpuscles, granules, pus-cells and, in cases where the vesicle has burst, aërial bacteria, etc. The early lymph is, therefore, believed to be purest, although there is a temptation to wait a day longer.

In most of the establishments quills are used. It is claimed that these absorb less lymph, dry better, and keep longer than bone or ivory points, which are too porous.

Attention is called by Dr. Law to the possibility of conveying any other disease than vaccinia from the cow to man. It has generally been considered impossible with any ordinary precautions. The subject has not been carefully studied, however. Foot-and-mouth disease (an epizoötic eczema), anthrax in its various forms, and tuberculosis are the three diseases from which infection is possible. The epizoötic eczema is very contagious indeed, but is not dangerous, and, fortunately, does not now exist in this country, though liable to be imported at any time. Malignant anthrax in cattle can easily infect man, though it has never been known to do so by vaccination. It is not of frequent occurrence, and its presence so markedly affects the animal that no one could fail to observe the disease. The possibility that a calf with malignant anthrax could be used for vaccine purposes implies more than ignorance on the part of the vaccinator. He would have to be a deliberate criminal. There is no fear from this disease.

The danger from tuberculosis is also remote enough; but in these days of polemical pathology there is room for arguments on each side. Dr. Law thinks that vaccinia may bring out a latent tubercular tendency in a cow, just as, in his opinion, small-pox does in human beings. He also thinks that Jersey cows, which are preferred by vaccinators on account of their soft skins, are much more consumptive than other breeds. In these two points others have had a different experience. It has never been shown that tuberculosis could be conveyed by vaccination. It is highly improbable that, even if a diseased calf were used, such a thing would occur.

On the whole, therefore, we may consider the dangers from disease in lower animals as practically non-existent, provided any reasonable care be used in selecting the calves for vaccination.

OFFICE SWINDLERS.

The city physician is reminded several times a year that eternal vigilance is the price of his personal property. The office swindler has become almost an established institution among us. He has to be provided against by the careful physician just as the truly ethical guard against the debauched followers of Hahnemann. His methods grow more ingenious or audacious every year. We recently received a letter from a distinguished gynecologist of this city reciting his experience. A gentlemanly individual called upon our correspondent and announced himself as the brother of Dr. Robert Battey, of Georgia. After some conversation, in which the stranger showed himself to be an intelligent and educated man, he requested the favor of a blank check, filled it out for a considerable sum, and desired the doctor to endorse it. This being refused, he apologized, and said he would return in a short time with evidences of his identity, but of course he never appeared again.

This was one of the bolder operators. The petty swindlers and sneak-thieves who prey on the doctor are more numerous. The estimable but invalid physician who wants just money enough to join his bereaved family in Australia; the deaf and-dumb man whose uncle was a physician; the man just out of the

hospital who wants a night's lodging; the itinerant case of extroverted bladder, or other anomalies, and the irrepressible agent of incomparable ledgers and day-books; these are all, more or less, familiar to the city physician. Nor is our country brother entirely neglected.

The practice of medicine is believed to make us charitable and humane. We are so often swindled in our bills that it becomes rather a matter of course to have some advantage taken of us. We are suspicious enough, but are disinclined to act promptly on our suspicions. The doctor is rather easy in his dealings with his fellow-men, though he may be sharp enough when it comes to interpreting symptoms. That is why the peddler of an unspeakable mucilage made his largest sales among our most distinguished practitioners. An eminent surgeon, of our acquaintance, looks sadly into his upper drawer where lie twenty-four cakes of an inferior quality of putty, which he bought, thinking he was helping the poor and getting something with superior plastic properties.

Every doctor must expect to lose an overcoat, or a few books, or a surgical instrument. The suffering patient who "will wait until he gets through dinner" is hard to guard against. We have heard of a patent enfolding chair for such parties which, being sat in, at once puts a splint about the limbs of the occupant. It never became popular, however. The doctor, we repeat, must expect to lose something, and it is well enough that he should. When a thief runs off with your overcoat and a set of obstetrical forceps, the world seems dark for a while. But later there comes by contrast a sense of moral elevation. You feel as though you could see a *Herald* reporter or endorse a mineral water without being a really bad man. You collect bills more rigidly for the next few weeks, and find some sweetness in the uses of adversity.

As a preventive to office swindlers, therefore, we recommend all due precautions, but no extraordinary and burdensome vigilance. We have always been pleased with the simple practice of instructing the servant to give the waiting but suspicious patient a copy of the "American Code of Medical Ethics," and to watch till he reads it. In nine cases out of ten he leaves in a softened and penitent mood, and we have reason to think subsequently confines his operations to homœopaths.

GAIL HAMILTON ON THE SPENT BULLET.

It is always painful to our sense of gallantry to have to mention the fact that the brain of woman weighs only forty-four ounces. But a talented lady, who uses the pseudonym of Gail Hamilton, has recently shown so strikingly the quantitative and qualitative limitations of the female intellect, that it rather compels our bringing to light the above anatomical figures. This distinguished authoress has written an article in the *North American Review* upon the subject of the "Spent Bullet," meaning the bullet fired by Guiteau. The line of thought, or perhaps we should say of intuitions, is somewhat as follows: Modern science has been for some years arrogating to itself certainty, and denying the value or truth of religion. The bullet shot by Guiteau was found, after eighty days of careful application of the best scientific methods, not where it was supposed to be, but — in the wash-basin. Hence modern science should hereafter acknowledge with humiliation that it is fallible, and should bow to the dictates of revelation. It is hardly necessary to discuss the merits of this extraordinary syllogism. We might inform the worthy lady, however, that the principles and practice of modern surgery have no connection whatever with the spirit of modern science. A man can be a good Christian and a good surgeon also, if he wishes. We would like to have our eminent contemporary, Dr. Post, expound the Scriptures to Miss Dodge, and think she could learn a great deal from him.

It is not the syllogism, however, which is only amusing, that we wished to criticise. But the fair authoress takes the opportunity to say many unjust things about the medical profession generally, and that part of it which treated President Garfield in particular. There has been a great deal of gossip among the ladies of Washington over our lamented President's treatment. Several in high authority were not pleased with the physicians, and in the cosy and confident way with which women discuss medical matters and men, they have settled that a great deal of the treatment was wrong. Gail Hamilton has evidently given vent to much hitherto pent-up feeling, and no doubt she, as well as her many Washington acquaintances, will now experience relief. We can only say that the subject is one which deserves calm and candid treatment rather than the cantankerous criticism given it in the *Review*. The judgment of the great body of the profession is, that the President's physicians did all that could be done for him, and no doubt considerably prolonged his life. The lady who tries to prove otherwise must adopt more powerful and dignified methods than are employed in moralizing over "The Spent Bullet."

THE DEATH OF DARWIN.

The death of Charles Darwin justly excites deep regret among men of science everywhere. No naturalist or biologist ever achieved so wide a reputation or earned it by better work. Darwin lived to see his views corroborated in the main by his fellow-workers, while among all intelligent people early ridicule had already given way to profound respect.

Medical science is not without its indebtedness to Darwin, and it should contribute due homage to his memory. The many luminous contributions to biological subjects made by the deceased scientist have elevated and excited a wider interest in those fundamental sciences which underlie medicine. Darwin's views regarding the variation of species have been richly suggestive to pathologists, especially in these later times. Darwin created an epoch in natural science. He turned the currents of scientific thought and work into new and broader channels. It is perhaps hardly true to say that his influence upon our especial science has been as yet great, since it has only been an indirect one. But it has certainly not yet ended.

THE LAMSON CASE.

There has been a great deal of idle talk and maudlin sympathy over the case of Dr. Lamson. In no trial was it ever shown more clearly that a deliberate and cold-blooded murder was performed. It may be that Lamson was an opium-eater, and was morbidly fond of prescribing aconite. But it seems equally sure that he was a dissipated and unprincipled medical tramp, who murdered his brother-in-law to relieve himself of pecuniary troubles.

The medical interest in the case, apart from the unhappy fact that the prisoner is a physician of American birth, is chiefly a psychological one. One learns how easy it is to excite the interest of two great nations over a man about to be justly hanged —if hanging be ever just.

The history of the murdered boy and of the symptoms produced by the aconite, furnishes little that is new to medico-legal science. The doses of aconite given were so large that it took no extraordinary skill to detect its presence in lethal amount.

Much Misery, Many Births, is the heading of an article in a Socialist paper of this city, giving some recent population statistics. According to the official Russian year-book, the population of Russia increases more rapidly in proportion than in any other country except Denmark and Holland. The annual number of births per 1,000 inhabitants, is in Russia, 49; in Germany, 43; in France, 26. The population of Russia doubles itself in 58 years, that of France in 165 years, Germany 68, and Italy 141 years.

On the other hand, the mortality rate is higher in Russia than in any other European country, being 37 per 1,000. The mortality is also greater, proportionately, among young children than it should be. The ratio of deaths among children under one year of age to the deaths among other children, is in Russia 1 to 4; in France it is 1 to 6; and in England 1 to 7. Illegitimate births seem to be the least frequent of any country.

The conclusion drawn from the above is, that where there is the most misery there are the most births.

Reviews and Notices of Books.

Lectures on Diseases of Children. By Edward Henoch, M.D., Berlin. New York: William Wood & Company. 1882.

This work embodies the record of cases seen and carefully studied during an experience of thirty-seven years in the field of diseases of children. There is an introductory chapter on methods of examination of infants, showing how the physician may acquaint himself with those factors by which certain appearances in childhood, which are found under normal conditions, are differentiated from those present in the adult, so that the mistake may not be made of considering normal conditions as pathological. The author then describes the diseases common to all periods of childhood, bringing in the important points in question without dwelling at too great length upon clinical histories. The last chapter is devoted to such affections of the skin as are characterized by certain peculiarities in children, reference being made to metastasis of skin diseases. On account of the great amount of practical clinical information contained in this volume, it is a very useful book for the general practitioner.

An Index of Surgery. By C. B. Keetley, F.R.C.S. New York: William Wood & Company. 1882.

This work is, as stated on its title-page, "a concise classification of the main facts and theories of surgery," and as a brief compendium of the existing knowledge in this department it meets a recognized want of the advanced student as well as the busy practitioner.

Under the modest title of index the author has arranged in alphabetical order the most important of the affections the surgeon is called upon to treat. Each heading is followed by an outline embracing history, pathology, and treatment, together with the various theories and operations. These sketches are more or less full, in proportion to the importance of the subject, the sections on diseases of bones, fractures, dislocations, syphilis, and tumors being worthy of special notice. The very comprehensive notes on ophthalmic surgery, by Henry Jules, F.R.C.S., which form part of the appendix, are alone worth more than the merely nominal price of the book.

We commend it to all students and others whose knowledge of surgery is either confused or rusty. It will be found especially valuable as a final remembrancer, to be read just before examinations, either for hospital or degree.

A Handbook on the Diseases of Women. By W. Symington Brown, M.D. 8vo. 240 pp. Illustrated. New York: Wm. Wood & Company. 1882.

This work has the merit of being a more complete practical elucidation of this much written subject than any we have seen in a book of such moderate size.

To say that great advances have been made in the diagnosis and treatment of women's diseases would be telling no news. Perhaps no department of medicine has developed so rapidly. To every thinking man it must be evident that the more rapid this progress the more frequent must be the publications representing the latest facts and ideas. The author of the present work, though making no attempt to go into details, or even mention the more obscure

and recondite divisions of his subject, has furnished a handbook of undoubted value.

A confused mass of facts and theories usually obtains in the mind of the student after perusing the larger works, and hearing one or two courses of lectures on the subject. A careful reading of Dr. Brown's book will certainly do much toward bringing order from this state of chaos.

Introductory chapters on the anatomy of the female organs and the use of instruments, together with a dictionary of the terms employed, justify the title of "handbook."

Lectures on the Pathology and Treatment of Lateral and other Forms of Curvature of the Spine. By William Adams, F.R.C.S. Second Edition. London: J. & A. Churchill. 1882.

These lectures were delivered in 1860-61, and were published in book form four or five years later. This, the second edition, seems to have been brought out chiefly through the instrumentality of Mr. F. R. Fisher, a young and industrious orthopædic surgeon of London. Whatever Mr. Adams writes must be good, for he is a painstaking, honest investigator, and one need not expect to find anything but what will bear the test of criticism. The book he has given now to the profession is a careful *résumé* of all important theories as to the causation of lateral curvature, candidly discussed on anatomical and physiological grounds. The mechanism is now understood by all as rotation of the bodies on the horizontal axis, with a combination of a general twisting. Just what produces this is a question which has led to the publication of books since the time of Dr. Dods, who wrote in 1824. Mr. Adams recognizes, first, predisposing causes, which are essentially constitutional, and second, proximate causes, such as long continuance of certain bad positions in standing or sitting, short limbs, etc., etc.

After giving quotations from Dr. Judson's paper, which was presented at the Academy of Medicine in 1826, he states that, "it will be seen that Dr. Judson's view of the cause and mode of production of rotation does not materially differ from that of Mr. A. Shaw; although the influence of the muscles in preventing or limiting the deviation of the spinous processes appears to be an original observation in the accuracy of which I concur." The views of Mr. A. Shaw, who wrote in 1832, and to which our author subscribes, are as follows.

"In lateral curvature of the spine we have a distinct demonstration that the articulating processes give way more extensively than any of the other parts of the column. This is evinced by the rotation which the spine makes in its perpendicular axis, at the same time that it inclines laterally. The joints of the articulating processes being situated posteriorly as well as laterally, the spinal column cannot yield in their direction without wheeling partially round; and it is owing to this rotation that the transverse processes and the ribs are directed obliquely backward upon the convex side of the curvature, thus giving rise to a fulness or swelling on the one hand and a depression or sinking in on the other."

If any one reads this book with the hope of finding out just what cases of lateral curvature do not require apparatus, he will be disappointed. That is the great want which Mr. Adams and all other writers have not met. The practitioner is often consulted by patients with what is called "incipient rotary lateral curvature," and he has no means of satisfying himself whether this is a case that has undergone spontaneous arrest or whether it will go on to hunchback. He does not know whether to apply a brace which may lower the muscular tone, or to prescribe a course of exercise. In either case he will incur more or less censure. Now, works on curvature of the spine should teach this one thing above all others. If there are many cases of spontaneous arrest in all ages and at all stages, we should very much like to know how we shall say positively of a given case, "This is fully arrested and no apparatus whatever is required."

Again, Mr. Adams is convinced that many of these old cases of spinal irritation, wherein such great suffering is experienced, are nothing more than rotary curvature of the spine, and he cites a few cases that are by no manner of means conclusive. One wonders how a man ordinarily so unbiassed in opinion and so close in observation, could be so far misled by the very cases he selects for conviction. Space does not permit an analysis here of these cases, but a close study even by a specialist will enable one to see wherein Mr. A. has fallen into error.

He takes good ground in therapeutics. Improvement of the general health, precautionary measures in view of the great influence heredity bears in the etiology, correction of bad position, systematic exercises adapted to the case in hand, apparatus so constructed as to prevent an increase in the deformity—such is the substance of that portion which deals with the treatment.

The book, notwithstanding its few glaring defects, is really a good one, and is valuable, not only to the specialist, but to the medical man who practises no specialty.

Spectacles; and How to Choose Them. An Elementary Monograph. By C. H. Vilas, M.A., M.D., Professor of Diseases of the Eye and Ear in the Hahnemann Medical College and Hospital, Chicago, Ill.; President of the Western Academy of Homœopathy, etc. Small 8vo, pp. 158. Chicago: Duncan Bros. 1881.

The Ophthalmoscope: Its Theory and Practical Uses. Same Author. Small 8vo, pp. 150. Chicago: Duncan Bros. 1882.

The first of these monographs gives useful advice to those who choose to select their own glasses at the optical store. It teaches the qualities of crown, pebble, periscopic, meniscal, and other lenses, and gives the tourmaline test for pebbles, while it properly inveighs against the practice of seeking the first advice as to glasses from other than a competent oculist. The "distinguished Russian" (from New York?), or "celebrated Pole" (from Chicago?), who, at the sacrifice of time and health and in consideration of his love for his fellow-men, and from ten to twenty times the commercial price, is prevailed on to part with the last few pairs of "Brazilian pebbles" in his stock, is shown up to the satisfaction of non-metropolitan oculists. The book reproduces a large number of admirable wood-cuts of spectacles, eye-glasses, and coquilles from Meyrowitz Bros.' (New York) catalogue of optical instruments.

The second monograph portrays the optical possibilities of convex, concave, and prismatic lenses, with well-selected diagrams in black. The history of the modern ophthalmoscope, dating from the Rekoss revolving disc, and its theory, as shown by the simple instrument of Helmholtz, are concisely put together. The instruments of Knapp and Loring are regarded as the standard ones; the descrip-

tion of the former is taken from his own (K.'s) account of it in the *Archives of Ophthalmology and Otology*, that of Loring's from the "Transactions of the American Ophthalmological Society, 1878." There are the usual chapters on the healthy and diseased fundus of the eye, and a brief chapter on ophthalmoscopic optometry, the original credit of which is assigned to Knapp, and whose mathematical formulæ may be found in Helmholtz's "Physiologische Optik." Practical tables for the measurement of elevations and depressions within the eyeball are reproduced.

The book is a concise essay on the subject, and admirably written. The dioptrical behavior of the eye is made very clear to the reader, while at the same time there is little in the line of new investigation; and we can hardly appreciate the statement in the preface that it is published "to occupy a place hitherto vacant in medical literature, and supply a want," etc.

One must forget Schweigger, Loring, Carter, and many others, in order to coincide with the author in this ubiquitous statement. This, however, does not interfere with its truthfulness as a guide to the elementary student of the ophthalmoscope.

A Manual of Midwifery. By Alfred Meadows, M.D., Lond., F.R.C.P., assisted by Albert J. Venn, M.D., M.R.C.P. The Fourth Edition, revised and enlarged, and illustrated with one hundred and thirty-seven wood engravings. 12mo, pp. xxiv, 498. New York: G. P. Putnam's Sons. 1882.

Whatever was wanting in former issues of Dr. Meadows' work seems to have been added in the present edition, and whatever was superfluous removed. The text is elucidated by ample, though not too profuse illustration, the language is clear and concise, and the scope of the volume thorough. Besides stating his own opinions and the results of his own experience the author presents, in an impartial manner, the teachings of different obstetrical schools. In dealing with puerperal fever, Dr. Priestley's classification, as adopted by the London Obstetrical Society, is generally observed. The book is published in a very convenient form, is neat in appearance, and does credit to the printer. It is useful as a handbook for the student, and as a book of reference for the busy practitioner.

British and American Physicians in Paris.—With a view to promote social intercourse and maintain good fellowship between British and American physicians, a society has been formed under the name of the "British and American Medical Society of Paris." Membership is limited to British subjects and citizens of the United States of America legally entitled to practise as physicians in Paris, and actually doing so. A certain number of dinners are appointed to be held annually; the first took place on February 1st. Among the members who form this society are Dr. McCarthy, Sir John Rose Cormack, Dr. Thomas Bishop, Dr. the Hon. Alan Herbert, Dr. Pratt, Dr. Marion Sims, Dr. Johnson, Dr. Faure-Miller, Dr. Jennings, Dr. Murray, Dr. Pepper, Dr. Rowlatt, and Dr. Loughnam, etc. The President for 1882 is Sir John Rose Cormack, and the Vice-President Dr. Bishop.

Professor Klebs, of micrococcus fame, is not popular in Prague, and it is thought that he will go to Zurich, to which place he has received a call.

Reports of Societies.

MATERIA MEDICA SOCIETY.

Stated Meeting, Thursday, March 23, 1882.

Dr. Farnham, Chairman, *pro tem.*

The paper of the evening, entitled

viola tricolor and its uses in eczema (see p. 449),

was read by the author, Dr. Henry G. Piffard.

The discussion was opened by Dr. Johnson, who remarked that the effects of salicylic acid or salicylate of soda upon the eyes were much more severe than those of viola tricolor. He had recently had a case of rheumatism under treatment by salicylic acid, in which he had to suspend the drug chiefly on account of the severe lachrymation which it produced. There was a flooding of tears and the eyelids became intensely red, causing great suffering on the part of the patient, who refused to take the drug any longer.

Dr. Bronson was exceedingly interested in the paper, and wanted to know whether the therapeutic action of viola tricolor was attributed in any degree to the salicylic acid which it contained.

Dr. Piffard replied that salicylic acid was the only active substance yet found in viola tricolor, and until some other active principle was found it was fair to presume that the therapeutic action was due to that, in view of the fact that there is a close correspondence between the physiological action of the salicylic acid and viola tricolor.

Dr. Bronson then inquired if by any possibility the salicylic acid could explain the therapeutic action of the viola tricolor. It occurred to him that, as the older writers employed the drug more particularly for the crusted forms of eczema, the salicylic acid which the drug contained might act as an antiseptic, perhaps as an anti-suppurating remedy. His own experience with viola tricolor was in a single case of a child, suffering from erythematous eczema. He tried the infusion for two weeks till he produced a laxative effect, and then stopped the drug. When the bowels were not freely open he used it again. In that case he discovered no other effect than what he should obtain from any laxative remedy. He was pursuing local treatment at the same time, and the case improved rapidly. At the time he attributed this simply to the derivative effect of the remedy; the derived action being created on the intestines, the external irritation was of course diminished. He also attributed a good deal of the cure to the local measures. At the end of a fortnight he abandoned the drug entirely, and continued to treat the case by simple local measures and tonics. Ultimately it made a good recovery. The remedy at that time seemed to him to have the ordinary effect of any laxative. The drug varies largely in quality.

Dr. Piffard stated that every medicinal herb when offered for dispensing should present characters which enable it to be identified. The officinal portion of this drug is the entire plant. The root is a very active portion of it; it contains twice the percentage of salicylic acid as the herb; the flowers contain a less proportion than the other parts.

Dr. Johnson remarked that those plants which have a perennial root have a larger proportion of

medicinal properties in the latter than in the parts appearing above ground. Thus in belladonna, the root is medicinally more powerful than the leaves.

Dr. Piffard had used viola tricolor in all sorts of eczemas. He found it most useful in eczemas in the second stage, where there is exudation and crusting, both when that is taking on the acute and subacute forms. The crusta lactea of infants will last three and six months, and even longer, when inefficiently treated. In that subacute condition there is not a great deal of discharge, but sometimes a greenish dry crust, and sometimes a yellowish green one, especially on the head and face. Most writers confine the term crusta lactea to eczema of the scalp. Strack in his original article, however, speaks of crusta lactea occurring on other parts of the body, showing that in his mind the term was synonymous with the word eczema of to-day. The cases of eczema in which this drug has been found most useful are those in which the vesicles or primary lesions have already disappeared, and there is exudation and crusting. When, however, the eczema has reached the third stage and becomes dry, and there is an attempt at the formation of a new epithelium, the viola tricolor does not prove as usefnl as some other drugs.

As regards the laxative effect of the drug, Dr. Piffard had not observed that property in using the viola tricolor. In the very great proportion of cases, even where he had made inquiry, the patient said there were no effects on the bowels. In the majority of instances patients remarked that there was some increase in the quantity of urine. In a few cases he had learned on inquiry that the urine had a disagreeable odor. One man said that it smelled as bad as asparagus urine, but not the same kind of a smell. It is judicious always to warn a patient in administering this medicine that it may possibly excite an aggravation of sufferings and an increase of eruption. As examples of this temporary aggravation, witness the effect of nitrate of silver on a conjunctivitis, or of an ordinary injection in gonorrhœa. There is a temporary increase of pain and irritation, which, when it subsides, carries with it some of the original cause of the complaint. If just the effect needed can be obtained without aggravation so much the better; but doses cannot always be so adjusted as to accomplish this result. Dr. Piffard further stated that in all cases where viola tricolor is employed medicine enough should be given to produce the effect of the drug. In the treatment of syphilis, he would not be content in treating a case at the start, until he had pushed the mercury up to the point at which he could tell it was working, as evidenced by the uncomfortableness about the mouth, etc. In like manner, in the use of arsenic in sub-acute cases of eczema, he would push the drug until its physiological effects had become apparent, and would then diminish the amount. In the various forms of external indolent disease, a stimulant of some sort, as nitrate of silver, sulphate of copper, and acetate of zinc, is used. These preparations bring blood temporarily to the part, and that blood when it goes away carries off some of the infiltration with it. In the infiltrated eczema green soap acts as a stimulant and irritant, producing temporarily an increase of redness, heat, and swelling; when the effects of the application have passed off, there is a diminution of these features—in other words, an improved condition of the part. He believed that viola tricolor and arsenic produced a congestive effect on the affected part; after the congestion passed off, the same result followed that was obtained from local stimulants.

The discussion being closed, Dr. Piffard called the attention of the society to some remarks on

THE SYSTEMATIC EXPLANATION OF THE ACTIONS OF DRUGS.

He said: There are some drugs, the action of which we can explain pretty satisfactorily. For instance, we will take an illustration of the allopathic application of drugs. If a man has a congestion of the brain and you give him on the one hand a purgative, you are producing a derivation to the intestinal canal. If you put a blister on the back, face, or neck you are producing a derivation to the skin. There you have a typical instance, properly speaking, of allopathic practice. If you give a man with congestion of the brain bromide of potassium, you are not producing a derivative effect. You are not treating the man allopathically but anti-pathically; in other words, you are giving a drug which acts upon the part affected in a manner the opposite to that which the disease is pursuing. Now, what a homœopath would recommend would be a drug like belladonna, in that same condition of congestion of the brain. He would say that belladonna congested the brain and therefore was the proper remedy. Here are three systems by which a certain diseased condition, viz., congestion of the brain, would be treated. First, the old plan, which was allopathic; second, the modern plan, which is anti-pathic, or commonly known as physiological therapeutics; and thirdly, the so-called homœopathic. The case of mercury in syphilis we cannot bring under either of those three categories. Homœopaths claim that mercury is homœopathic to syphilis. It certainly is not anti-pathic, nor is it allopathic, and there is no sound evidence that it is homœopathic. The older practitioners sought to cure syphilis with mercury by producing an increased action of the salivary glands. Now we cure it more effectively and pleasantly by giving the drug in doses that will not produce this effect. There is no explanation in harmony with any of these *Systems* to account for the action of mercury in syphilis; neither is there any systematic explanation of the effects of cinchona in intermittent fevers. Hahnemann claimed that cinchona was homœopathic to intermittent fever. In fact, some experiments with that drug led him to the adoption of the theories that he advanced, and the promulgation of his system of therapeutics. When you examine closely the effects of cinchona and the records made by Hahnemann as to the effects that he observed, you will *not* find the "similarity" which is essential to the maintenance of his doctrine.

The prominent and distinctive feature of intermittent fever is the intermittent recurrence of several paroxysms of fever following a single dose of the malarial poison. A man passes a single night in a malarious district, and he may have for months a succession of quotidian and tertian attacks. But there is nothing in the physiological action of cinchona that has been brought forward thus far to show that this periodicity is a feature of the action of the drug. Hahnemann himself stated that the renewal of the artificial quinine fever only occurred after additional doses of the drug. It will be seen, therefore, that cinchona is not homœopathic to the periodical feature of the disease, though it may sometimes produce symptoms that closely counterfeit an individual paroxysm.

Dr. Bronson stated that he supposed that the usual explanation of the action of cinchona in malaria was that it acted as a nervous stimulant, and thus tided the patient over the disease.

Dr. Piffard continued: There have been before the world these three systems of therapeutics, viz., allopathic, anti-pathic or physiological, and homœopathic. Neither of these systems explains the action of mercury and cinchona in diseases in which they are found especially useful. That does not deny that there may be some other explanation outside of these systems which will prove satisfactory.

Dr. Farnham thought that Dr. Bronson's remarks with reference to the tiding over would apply just as well to other drugs which were not found equally useful in curing malaria as cinchona.

In conclusion, Dr. Fuller exhibited a specimen of his hypodermic tablets of morphia, containing one-sixth of a grain. Dr. Piffard stated that at the last meeting a discussion was held on the subject of comparative solubility of the Wyeth and Fuller tablets, intended for hypodermic injection. It was the result of experiment that evening with Dr Fuller's preparations that, while much more soluble than those of Wyeth Brothers, they were still not sufficiently soluble for hypodermic use. Since then the tablets of Dr. Fuller had been made so that they possessed all the solubility that could be desired. Further experimentation at the present meeting demonstrated this fact. Dr. Fuller's specimens dissolved in the short period of thirty seconds.

The society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 20, 1882.

Fordyce Barker, M.D., LL.D., President, in the Chair.

Dr. W. M. Chamberlain spoke concerning some of

THE USES OF RUBBER TUBING IN THE THERAPEUTICS OF REDUCTION OF BODY-TEMPERATURE.

About a year ago Leiter's tubes, made of composite metal, and arranged so as to form disks of various shapes and sizes, were introduced into New York from Vienna as a novelty. They were presented at the International Congress in 1881, protected by patent obtained in Austria. It was the purpose of the inventor to obtain a patent in the United States, but he found that the principles of the appliances had already been given to the medical profession several years ago. In the year 1874 Dr. Chamberlain presented to the New York Medical Journal and Library Association the subject of the various ends which could be accomplished by extemporized appliances made from rubber tubing and used for circulating water over the surface of the body for the purpose of reducing temperature. But he had been unable to find any publication of the communication. At that time he supposed it was his own device, but subsequently ascertained that the same idea had been presented by Dr. Roberts, of London, in 1871, and Dr. Ashhurst, of Philadelphia, in 1872. Although the appliances were original to himself, they were not unprecedented; but certainly they antedated by several years the supposed novelties designated as Leiter's tubes.

Dr. Chamberlain then spoke of cold as an antipyretic, and remarked that the best single monograph in the use of cold in surgical affections had been written by Esmarch. He quoted the following sentence to show the high estimation in which the use of cold was held by that writer: "Of all the means which we possess for limiting the inflammatory process, I regard cold as the most available and most efficient, and without it I would rather not be a surgeon."

The essential feature of Dr. Chamberlain's appliances was the circulation of water through coils of rubber tubing, availing himself of the siphon pressure. Coil the tubing and make disks of varying size, and attach one end to a piece of tubing connected with a fountain placed at such height as may be desirable. He had applied cold by this means in a number of local affections with satisfactory results. The coils possessed a certain degree of usefulness in the treatment of the heat of fever, and perhaps might be available in cases in which objections were made to the use of baths or packs or Kibbee's cot. The rapid return of the heat, after the use of the cold bath, might be prevented by the use of the coils. He had found the syphon principle especially serviceable in irrigating the internal cavities, such as the stomach and bladder. He thought that the coils would be of service in the application of cold to the eye. When the coils were fastened together with wire tape used by milliners, the disk or plate could be bent so as to fit any portion of the body.

Dr. Leale said that he was present at the meeting of the Medical Journal and Library Association in 1874, when Dr. Chamberlain made his demonstrations.

Dr. Vanderpoel recollected well when Dr. Chamberlain presented the same subject to the Medical Society of the State of New York. [See Transactions of that society for 1873–74, p. 16, of the second part, "The Application of Hydrostatic Laws to Therapeutics," by Dr. Chamberlain, of New York. "The apparatus consisted of rubber tubing, with a nozzle and stop-cock attached, so arranged that it will conduct fluid from a vessel above upon an object below its level. The apparatus can be used for the treatment of almost all forms of disease . . . removal of foreign bodies from the ear; treatment of diseases of the eye; irrigation of the stomach, etc." Rep.] He spoke of the superiority of a *soft* rubber tube over the ordinary stomach tube in irrigation of the stomach. It needed to be about five feet long, could be introduced with the greatest ease, and with it there was no danger of injuring the mucous membrane.

The President regarded this method of applying cold as a therapeutic resource that could be made available in a very large number of cases.

Dr. J. D. Bryant then read a paper, entitled

PERIOSTEAL PRESERVATION IN AMPUTATION OF THE LEG —ILLUSTRATED BY SPECIMENS.

The term "periosteal preservation" was used synonymously with "periosteal flaps," and the leading feature of the paper related to the question of the ability of healthy periosteum, when separated from healthy bone, to produce bone having, practically, a normal texture. Can healthy periosteum be separated from healthy bone of the human subject and its integrity so preserved that it will produce bone? Experiments upon the lower animals answer in the affirmative. In the human subject, however, operations performed with this question in mind have not proved as satisfactory. That bone has been found connected with detached periosteum in

the human subject is unquestionable, but it has not been determined positively whether it was removed with the periosteum or developed from it subsequently. Dr. Bryant then directed attention to the anatomy of the periosteum, and its application to the subject of surgical interference in cases of injury or disease of bones. He reached the conclusion that the periosteum can be detached and bone developed from its inner surface sufficient to entitle the fact to consideration in operative surgery.

In the second place, "Is this secondary growth of bone constant in its occurrence, durable in its existence, and useful to the patient?" It is not constant in its appearance; although the rule is that production of bone does take place. If proper precautions have been observed new bone will be produced within from five to eight months. But it is not, under all circumstances, permanent. It is useful to the patient, as shown by the advantages to be gained, such as preventing necrosis, affording protection from the discharges, and preventing the adhesion of the cicatrix to the end of the bone after amputation. After considering the objections urged against periosteal flaps, Dr. Bryant presented specimens and gave the history of two cases. In one the Hood, in the other the circular, flap was made. The periosteum was raised in conjunction with the soft parts from the subcutaneous surface of the tibia. But in the second case the coaptation of the flaps was made obliquely; that is, in a line parallel with the subcutaneous surface of the tibia, and therefore in a line parallel with the line of detachment of the periosteum flaps of the bone from which it had been raised. This deviation allowed the upper portion of the flap to fall, by its own weight, evenly over the divided end of the bone, and brought the cicatrix between the ends of the two bones. The patient was able to wear an artificial limb at the end of five weeks without annoyance, and the cicatrix remained soft and movable. On examination of the specimen the periosteum was seen to be evenly attached to the end of the tibia. There was no tangible evidence of the production of bone. The end of the fibula was covered with fibrous tissue continuous with its structure.

Dr. Stephen Smith described his method of forming the periosteal flaps, which consisted in making a long incision upon the posterior part of the leg, making flaps laterally, throwing them back about one inch, or as far as the normal curve allows them to turn back, and then making complete circular section of muscle and bone, ligate all the vessels, and then turning the periosteal flap back with the entire mass, so that the periosteum and the tissues between it and the skin are entirely undisturbed. After turning the periosteum back evenly to the point where the bone is to be divided, the division is made by means of a very fine saw, in order to avoid, to the greatest extent possible, injury to the bone. In his cases he had never used a drainage-tube, because drainage was so complete as to render it unnecessary. Even without the use of antiseptics less suppuration had occurred than after amputation by the ordinary method. The advantages of the operation mentioned by Dr. Bryant he had seen very decidedly, especially the movable, soft cicatrix, which will bear artificial limbs without trouble, and very early. One advantage, not mentioned by the author of the paper, was that the bone did not atrophy and become spindle-shaped, as after an amputation by the old method. A stump was obtained which had a great deal of breadth and firmness. In twenty or thirty cases he had seen only two accidents, one being the formation of a spicula of bone, which was of but little consequence, and the other a small necrosis. The advantages, immediate and remote, attending the saving of the periosteum exceeded by at least fifty per cent. any results he had seen obtained by the old operation.

The Academy then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 14, 1882.

(Continued from page 446.)

Dr. J. C. Hutchison, Vice-President, in the Chair.

Dr. R. F. Weir presented a urethra which illustrated the results of

INTERNAL URETHROTOMY

as performed by Maisonneuve's instrument. The stricture was of gonorrhœal origin, and was a close one, admitting originally No. 5 Chanière, situated in the deep portion of the urethra, just anterior to the triangular ligament. It was divided superiorly with a blade 11 mm. in breadth, which would cut, as had been determined experimentally, so as to admit a No. 26 sound, but by twisting the instrument slightly, so as to make a second cut in withdrawing it, the opening in the urethra was satisfactorily enlarged. In this case a No. 34 sound was subsequently introduced, after all inflammatory action had subsided, as tested by the thermometer. The patient was forty years of age. The operation was performed January 19th, and he died February 12th, from peritonitis following a strangulated hernia. The specimen showed the two cuts in the roof of the urethra, one larger than the other, and each nearly entirely covered by a delicate cicatrix.

Dr. Weir also presented a specimen of

TRAUMATIC ABSCESS OF THE LIVER,

with the following history.

William O——, thirty-four years of age, single, was admitted to Bellevue Hospital, January 16, 1882. Twelve days before admission he slipped on ice and fell, striking on his buttocks, and six days later was obliged to quit work and take to his bed.

On entering the hospital his general condition seemed quite good. He became, however, gradually weaker, and during the first night was slightly delirious. The delirium continued constantly after the first night, though he could be aroused sufficiently to answer questions. Temperature, when admitted, 101¼ F.

On the afternoon of the 16th, and again on the 17th, a hypodermic needle was introduced into a tumor which he had in the hepatic region, and a bloody looking fluid evacuated, which, upon microscopic examination, was found to contain few or no blood-globules, but quite a number of pus-cells and some granular material.

On January 18th tumor was aspirated and sixteen ounces of fluid extracted, which was very viscid and of reddish brown color. Microscopic examination showed large polygonal cells, which contained fat and yellow-looking granules, bacteria, no well-formed cells of any description, blood-globules, and detritus.

Dr. Welch, who made the examination, supposed the patient's trouble to be from an abscess of the liver.

On January 19th Dr. Weir introduced a trocar, and

the canula was left in the cavity to secure maximum freedom of drainage. Some twenty or twenty-five ounces of fluid were removed. The operation was done under the carbolic acid spray; and the abdomen was covered with an antiseptic dressing. The dressings were changed three times during the night, and subsequently as often as any sign of discharge was discovered about the edges.

On January 21st the canula was removed, and a drainage-tube of large size substituted.

The patient died of heart failure and pulmonary œdema, at 8.50 P.M., January 22.

Dr. Weir also presented a specimen of

LACERATION OF THE ŒSOPHAGUS, ABSCESS OF THE NECK AND MEDIASTINUM,

with the following history, furnished by Dr. F. M. Townsend, house surgeon at the New York Hospital: J. A. H——, thirty-five years of age, while eating meat felt some foreign substance, which he believed to be bone, lodge in his throat. He was unable to dislodge it, and pain and difficulty of swallowing soon developed, with tenderness upon the right side of the neck. He was unable to swallow solids, and fluids only with more or less difficulty. On the following day a physician was called, who explored the throat with his finger, but was unable to detect any foreign body. An emetic was given but nothing was dislodged from the throat. The throat was then explored with a sponge probang, but with negative results. On the third day the symptoms had somewhat subsided, and the patient could again take fluid food. On the fourth day the patient felt as though the body had disappeared from his throat, but he was still unable to swallow solids: and on the evening of that day a swelling of the neck was noticed, which increased on the fifth day, and most of the previous symptoms returned. The pain and tenderness increased; the swelling increased in size, and on the sixth day the patient had a well-marked chill, followed by fever and sweating. Difficulty of breathing became a prominent symptom. On the seventh day the patient had the second chill, and the severity of all the symptoms was increased. On the evening of the seventh day, the dyspnœa became extreme, and several laryngeal spasms occurred. On admission, seven days after the accident, he complained of severe pain, referred to the right side of the neck, had marked dyspnœa; respirations, 40; pulse, 130; and temperature, 102⅘° F. Breathing laryngeal. He was unable to swallow either solids or fluids. There was a sensation of general pressure upon both the windpipe and throat. There was marked swelling of the tissues of the neck, especially upon the right side; enlargement of glands under the jaw; the head was thrown back; the mouth was held open. The integument was tense, and the tissues beneath it boggy and reddened, and the parts were very tender. Laryngoscopic examination negative, except that the tissues of the pharynx and larynx were œdematous and red. The dyspnœa increased in severity; cyanosis was marked; respirations were 50; temperature, 103⅘° F.; swelling increasing, and several laryngeal spasms occurred.

At 4 P.M. February 11th ether was administered, the neck extended and the head turned to the right, and an incision was made by Dr. Weir, beginning opposite the thyroid cartilage—left side—midway between it and the sterno-mastoid muscle, extending parallel with that muscle for about three inches to the sternum, and dividing the skin, superficial fascia, and platysma. The dissection was continued through the swollen, dark-colored tissues until the great vessels of the neck were reached, which were drawn to the outer side with retractors, while the tissues on the inner side were drawn in an opposite direction. The anterior jugular vein was divided in the dissection and ligated. A small artery was also cut and ligated. The deeper tissues of the neck were found to be infiltrated with pus, having a very fetid odor, and several small pus-cavities were opened. The dissection was continued through the sloughing cellular tissue, until the œsophagus was reached, when a search was made for the foreign body, but it was not to be felt. A stomach-tube was introduced through the pharynx and carried to the stomach, but no foreign substance was encountered, nor could anything abnormal be felt in the œsophageal wall while the tube was in situ. Further interference was deemed inadvisable, the patient's breathing having become easier. A fenestrated drainage-tube of large size was inserted to the bottom of the wound, and the parts left open. The patient rallied from the ether slowly, remaining semi-unconscious for several hours. During the early part of the evening he breathed easier, the relief being apparently due to removal of pressure. The pulse, temperature, and respiration were not materially changed. Laryngeal spasms, however, occurred later in the evening, and increased in severity and frequency, the general condition of the patient became markedly worse, and at 11 P.M. the patient was again etherized and laryngotomy was performed. After a somewhat tedious dissection through œdematous tissues, the thyro-hyoid membrane was reached and the larynx opened, the patient in the meantime having had a laryngeal spasm, and death from asphyxia was imminent. Artificial respiration was performed, and breathing again established. The hemorrhage was quite profuse, the blood finding its way into the larynx and causing much irritation. It was not readily controlled by pressure. The patient rallied from the ether more promptly than after the previous operation, and for twelve hours afterward decidedly improved, but after that time grew steadily worse, and died on February 13th, at 1.30 P.M., with a temperature of 106°, which reached afterward 107⅘° F.

At the autopsy there was found a small quantity of pus at the upper part of the anterior mediastinum. There was marked œdema of the right side of the epiglottis. Just below the cricoid cartilage were two small openings in the anterior wall of the œsophagus, which communicated with the deep fascia of the neck, and through it to the external wound. There was pus in the intermuscular planes on both sides of this region. The trachea contained foul pus opposite the site of the openings in the œsophagus, its mucous membrane was red, but there was no opening, and no foreign body was found.

The left lung contained a cavity at its apex as large as a walnut, and had thick walls, with patches of peribronchial thickening in the neighborhood.

The society then proceeded to the transaction of miscellaneous business.

BEQUEST TO DARTMOUTH MEDICAL COLLEGE.—The late Edwin Stoughton left a bequest of $2,000 to the pathological museum of Dartmouth College. He had previously given about $12,000 to this museum, which goes by his name.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 24, 1882.

Dr. F. R. Sturgis, President, in the Chair.

Dr. A. D. Rockwell read a paper, entitled,

OBSERVATIONS ON HEMIPLEGIA, BASED ON EIGHTY-ONE RECORDED CASES, WITH SPECIAL REFERENCE TO CEREBRAL LOCALIZATION (see p. 452).

Dr. E. C. Seguin remarked, with reference to blindness with hemiplegia, in which recovery took place after treatment, that it seemed to him the cases were more important for clinical study than for a scientific discussion of the question of localization, because of the lack of ophthalmoscopic examination.

Another point was with reference to Dr. Rockwell's statement that the special senses were not connected with the hemispheres.

At the present time it seemed that there was cumulative evidence to show that a connection did exist. Experiments upon animals, at least, were very conclusive that destruction of certain portions of the parietal and occipital lobes will produce bilateral nearsightedness and blindness, and also deafness.

With reference to audition in man, there were exceedingly few cases in favor of the existence of any such connection. One was that reported by Dr. A. B. Ball and himself, where there was a peculiar form of aphasia. At one time the aphasia was complete; but after a while the ataxic element passed away, and in a great measure the patient recovered his capacity to read and understand, but never recovered the power of hearing. He could hear single words, and even a simple sentence, but continuous remarks were a meaningless jumble to him.

Autopsy showed the only lesion of the brain to be in the inferior part of the parietal lobe, extending well down toward the occipital and sphenoidal lobes, and consisted of a patch of softening which destroyed a considerable area of gray matter and some adjacent white matter, approximating very closely the area of special senses.

With reference to the cortex, the evidence was simply growing, and just now it was impossible to make any correct statement with regard to man.

CALCIUM SULPHIDE AS AN ANTISUPPURATIVE.

Dr. A. H. Smith, President of the Therapeutical Society, then presented the report of the Committee on Restoratives on the above subject. The report was based upon fifty-one cases in which the drug had been used by Drs. W. T. Alexander, Geo. Bavlis, H. T. Hanks, D. M. Cammann, Austin Flint, V. P. Gibney, T. H. Burch, Robert Amory, of Brookline, Mass., and communications from Drs. G. H. Swasey, E. C. Seguin, and Bingham, of Burlington, Vermont.

A sketch of the history of the drug had been furnished by Dr. John C. Peters. The affections in which it had been employed were pustular acne, chancbroidal bubo, furuncle, purulent ophthalmia, otorrhœa, tonsillitis, suppurative endometritis, axillary abscess, mammary abscess, phlegmonous periarthritis, phlegmon of the neck, hordeolum, bromic acne.

The report contained the following conclusions:

First.—In many cases of suppurative affections ranging from simple pustules of acne to extensive suppuration certainly an appreciable, often a marked benefit is derived from the use of calcium sulphide. At the same time its action is not uniform.

Second.—The drug is somewhat prone to irritate the stomach, therefore, small doses, frequently repeated, should be used, and one-tenth grain every two hours in acute cases, as an average dose, although larger doses may be required. Some patients may bear well one grain three times a day. Patients are more or less annoyed with eructations of sulphuretted hydrogen while taking the drug.

The report being before the society, Dr. David Webster said that he had used calcium sulphide in two cases of suppurative disease of the ear, and, as he thought, with marked benefit. He gave it in one-fourth to one-half grain doses four times a day. One was a case of acute otitis media occurring during recovery from typhoid fever. The other was a case of suppurative inflammation of the middle ear, with considerable swelling over the mastoid region, constant pain in the ear, and such a condition, as, a few years ago at least, would have almost demanded Wilde's incision. The patient was a badly nourished girl, and was seen in consultation with Dr. Loughlin. The calcium sulphide was recommended and the benefit was very marked and rapid in both cases. He had used the drug in other cases without benefit.

Dr. A. W. Warden had used the drug in middle-ear disease with some benefit, but had obtained the best results in adenitis. He asked concerning the physiological effects of the drug, and with reference to its administration to the old or the young.

Dr. Sexton had been specially interested, while listening to the reports of some of the speakers, particularly his friend Dr. Webster, who at one time had no faith in the efficacy of the drug. As to the age of the patient, he had given it to children as young as one and two months old, and without any evidence whatever of deleterious effects. He had employed the drug six or seven years in aural practice, and the preparation which he preferred for children was the trituration of the hepar sulphur with sugar of milk. Fuller's tablets reduced to powder might be used. Dr. Sexton then referred briefly to cases in which the drug had afforded prompt and marked relief; for example, abscesses over the mastoid process, middle-ear disease, and quinsy. In some cases he had thought that too large doses had been given, and he had frequently reduced the size from one-half to one-fourth of a grain. He had not always obtained the best results in acute cases, but in general the subacute cases had yielded the most satisfactory results.

Dr. H. G. Piffard referred to the fact that probably pure sulphide of calcium had not been used, a fact which was readily explained by the impurities present in the substances used in its preparation, and the instability of the compound when made pure. The fact that there is such a difference in the preparations sold under the name calcium sulphide doubtless explains some of the failures encountered in its use. The antidotal action upon mercury was the first therapeutic effect of the drug noticed, and at one time it had an extensive reputation as an anti-mercurial. Its use in furuncle was first mentioned probably by the homœopaths. Subsequently Ringer brought the sulphides forward as remedies to be used for the arrest of suppuration. In this city Dr. Sexton was the first to use the calcium sulphide in suppurative otitis, and he himself was the first to use it in suppurative bubo. He thought there was no doubt that, in acute inflam-

matory processes, the drug was efficacious in aborting and arresting suppuration.

Dr. O. B. Douglas reported two cases—one of submaxillary abscess following scarlet fever, in which the remedy was used with benefit; the other, pustules upon various parts of the body following vaccination, in which the drug was taken without result. Dr. Douglas also read a letter received from Dr. Robert Amory, of Brookline, Mass., in which was given some evidence that exposure to the fumes of the bisulphide of carbon was liable to be followed by the occurrence of furuncles.

Dr. Peffard remarked that the physiological effect of the drug in large doses, mentioned in "Hahnemann's Materia Medica," was the production of furuncles; but the evidence was so disconnected as to seem to be unreliable. While experimenting with sulphide of potassium and other sulphides, for the purpose of ascertaining what the active agent was in the compound, he had seen some evidence which pointed toward the same conclusion; and it would seem that Dr. Amory's observations had carried him in the same direction.

The discussion being closed, the Secretary was empowered to furnish credentials to members who are qualified to hold office, and desire to attend the American Medical Association as delegates.

The Secretary requested the members to notify him at once of change of address, in order that his report to the Secretary of the State Medical Society might be completed immediately.

The society then adjourned.

Correspondence.

LACERATION OF CERVIX UTERI.

To the Editor of The Medical Record.

Dear Sir: I herewith enclose you the paper which I read at the London Medical Congress on "Laceration of the Cervix Uteri," extracted from the *British Medical Journal* of November 26, 1881, and would beg you to publish it in extenso, as soon as possible. It is the best reply I can give to the untruthful and therefore unjustifiable statements made by Dr. Pallen in your number of February 25th, which my friend, Dr. Marion Sims, has just placed in my hands. I have read this letter with feelings of amazement and indignation. To utter the drivelling idioms which Dr. Pallen imputes to me in the discussion that followed the reading of my paper, I must have been laboring under senile softening of the brain, an imputation that the writing of the paper itself negatives. Not one of Dr. Pallen's statements respecting my utterances in the debate is true, and I appeal to the very physicians present whom he names as corroborative witnesses of what I assert. In commenting on my paper, Dr. Pallen commenced by speaking in eulogistic terms of my early gynecological writings, thereby much mollifying me, and making me very anxious to show even more forbearance and courtesy than I had done before. He went on to state that I had, however, neglected to follow the recent progress of uterine surgery, and that if I would come to his hospital in New York he would show me his operations and prove to me the correctness of his opinions. As far as my memory serves me, these were the only "arguments" he used—arguments not very likely to convert the author of such a paper as the one I had just read, founded on the personal experience of forty years. In my reply I stated that I had not condemned or negatived the new operation for cervical laceration; that I admitted that it might be a desirable one in some extreme cases of deep laceration, with lobular segments, such as Dr. Emmet had figured in his work. I maintained, however, that this operation was not a scientific progress presented as Dr. Pallen had presented it in his paper read at Cambridge in 1881. Such an operation was, I considered, totally unjustifiable in the immense majority of cases in which Dr. Pallen advised it and said he had performed it. As I no longer practice operative surgery I left it, however, to my juniors to fix the legitimate limits of the operation. I added that it was true, as all who knew my works were aware, that my time and thoughts had been thrown by invalidism, for many years, into other channels. At the same time I had always continued to take the liveliest interest in gynecology, and continued to practice it actively, until a few years ago, in London in the summer, and was still practicing as a gynecologist, much consulted, at Mentone, on the Genoese Riviera, in the winter. I remember well that I concluded my reply by stating that Dr. Pallen need not be so angry with me for criticizing his doctrines, as I thereby gave him the opportunity of ventilating them, but that to establish them in Great Britain he would have not only to convert me, but every gynecologist in the country.

In this reply there was no recanting, no contrition, no expression of regret—in a word, no drivelling. So far from retracting the opinion embodied in my paper, I now endorse every word therein contained. Moreover, I now add that my opinions on the subject are more decided than those expressed in my paper, in which they are toned down—softened by a feeling of courtesy which I now perceive was lost on Dr. Pallen. I *now* state emphatically that I consider his doctrines, as contained in the paper read at the Cambridge meeting of the British Medical Association, as adding new terrors to the natural pangs of parturition, as an outrage on uterine surgery, utterly untounded on pathological facts.

That I am not alone in this opinion will be shown by an extract from the Paris *Journal de Médécine et de Chirurgie Pratiques*, a much-esteemed journal edited by M. Lucas Champonnière, a young and rising hospital surgeon. In the number for September, 1881, giving an account of the London Medical Congress, the editor says, p. 387:

"In the obstetrical section the discussion was on modern surgical interferences, the total ablation of the cancerous uterus (Freund's operation), the ablation of the healthy ovaries (Battey's operation), the suture of the lacerated uterine neck (Emmet's operation); we only speak of the last known surgical operations. Gynecology is the field of an operating debauch (d'une debauché operatoire) which, fortunately, now and then finds opponents. An excellent paper of Dr. Henry Bennet's has beaten a breach in a most serious manner in this operation of Emmet's, which is so abused that in fifty women on whom it is performed there is scarcely one that wants it. This does not mean that it should never be practiced."

I remain, sir,

Very truly yours,

J. Henry Bennet.

Mentone, France.

PHARMACODYNAMICS.

To the Editor of The Medical Record.

Sir: The action of drugs and their uses is one of the most important subjects to which the attention of the medical practitioner of the present day can be directed. Whatever may be our theories concerning a given pathological condition, however varied the opinions of physicians as to either immediate or remote causes, we must find some common ground on which to fix our principles of treatment; and he to whose good judgment is superadded the most general and exhaustive knowledge of drugs in all their uses, whether given in large or small doses, will be sure to meet with the greatest success in the treatment of disease.

All medicines have a positive and a negative action. As the amount given is either much or little, so its operation, positive or negative, will be found to correspond to this variation in strength of dose.

Opium in large doses is a powerful narcotic—when given in small doses it becomes a valuable stimulant. Mercury is a cholagogue cathartic when given in large doses, while very small doses of this drug relieve a similar condition of the "prima via" arising from other causes. Large doses of ipecac will produce vomiting and dysenteric diarrhœa. This condition, Dr. Ringer tells us, will generally yield to hourly drop doses of ipecacuanha wine.

"Tartar-emetic" and veratrum viride, in like manner, when given in very small doses will relieve those pathological conditions which most nearly correspond to their toxic effects.

The same therapeutic principle prevails in reference to all drugs whose action has been carefully and thoroughly investigated and ascertained. To no single school of medicine are we wholly indebted for whatever of knowledge we possess concerning this subject of pharmacodynamics; and the result of this long-continued and thoughtful research on the part of unprejudiced minds seeking only to find a truth, has been to bring all such investigators nearer the same conclusions.

As all streams finally pour their waters into one common ocean, so the tendency of all intelligent and unselfish thought concerning a correct knowledge of drugs and their uses is toward the common ground of the co-worker in the grand scheme of how to best mitigate or relieve the sufferings of humanity. Headland, in his introductory remarks upon the science of therapeutics, thus emphasizes the importance of united effort: "While other sciences are moving and other inquiries progressing fast, this subject, so momentous in its applications, has, in spite of the earnest labors of a few talented investigators, made after all but small progress. Let but those who feel this want bestir themselves to remove it, and it will soon be done. Those doubts and difficulties, which are now slowly clearing away before the efforts of a few, will then be finally dispelled by the united energies of all: and instead of our present indecision and uncertainty on many points, we shall find ourselves eminently qualified to wage the conflict with disease, being skilled in that science whose name bespeaks its peculiar importance."

For want of a better term, I have denominated as positive and negative the action and effect of medicines when administered in comparatively large or small doses; and the lesson which we must surely sooner or later learn from that infallible source of facts, experience, will teach us that, to be true to our high calling as members of one of the noblest professions, we must not be indifferent to the truth, though, at times, it may seem to have its origin in a professional Nazareth.

The recognition of a positive and negative principle in therapeutics is not of recent date. We find in the writings of Gregory the Great, the following proposition: "Mos medicinæ est ut aliquando similia similibus, aliquando contraria contrariis curet." And he further adds: "Nam sæpe calida calidis, frigida frigidis, sæpe autem frigida calidis, calida frigidis sanare consuevit."

The two most important factors in the solution of this problem of pharmacodynamics are found, the one in the course of investigation pursued by so-called "allopathists," the other in the "provings" of Hahnemann and his followers; and so zealous have been these workers in their search for hidden treasure, and so closely have their courses run that they have at times occasionally labored on the same vein, and each in their turn considered themselves the discoverers of that which was already known to the other, though called by a different name.

Finally, a careful review of the past, and an honest, thoughtful consideration of present methods of medical theory and practice, must convince us that only by unity of effort can we possibly attain to that strength of knowledge concerning the various actions and uses of medicines, so necessary to the judicious and successful treatment of all forms of disease.

Almon S. Allen, M.D.

40 Lee Avenue, Brooklyn, N. Y.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 16, 1882, to April 22, 1882.

Greenleaf, Chas. B., Major and Surgeon. In accordance with Par. 12, S. O. 78, C. S., from headquarters of the army, relieved from duty in this Department. S. O. 57, Department of Dakota, April 11, 1882.

Gardner, W. H., Captain and Assistant-Surgeon. His assignment to duty at Fort McKavett, to relieve Surgeon Waters, revoked, and to report to the Commanding Officer, Fort Davis, Texas, for duty as Post Surgeon. S. O. 38, Department of Texas, April 14, 1882.

Lauderdale, J. V., Captain and Assistant-Surgeon. Par. 1, S. O. 47, C. S., from these headquarters, in regard to him, revoked; and he will proceed to Fort Sully, D. T., and report to the Commanding Officer of that post for duty. S. O. 59, Department of Dakota, April 13, 1882.

Brown, P. R., Captain and Assistant-Surgeon. To be relieved from duty in Department of Texas. On receipt of this order to proceed to New York City, and on arrival report by letter to the Surgeon-General. S. O. 88, A. G. O., April 17, 1882.

Finley, J. A., Captain and Assistant-Surgeon. Relieved from duty at Fort Concho, Texas, and assigned to duty as Post Surgeon at Fort McKavett, Texas, relieving Surgeon Walters. S. O. 38, C. S., Department of Texas.

Kilbourne, H. S., Captain and Assistant-Surgeon, having reported in person at these headquarters,

will proceed to Fort Shaw, Mont. T., and report to the Commanding Officer of that post for duty. S.O. 60, Department of Dakota, April 14, 1882.

Corbusier, Wm. H., Captain and Assistant-Surgeon. Assigned to duty as Post Surgeon at Fort MacKinac, Mich. S. O. 67, Department of the East, April 15, 1882.

Davis, Wm. B., Captain and Assistant-Surgeon. So much of Par. 12, S. O. 78, April 5, 1882, from A. G. O., as directs him to report for duty to the Commanding General, Department of the Platte, is amended as to direct him to report in person for duty to the Commanding General Department of Dakota. S. O. 87, A. G. O., April 15, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 22, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 15, 1882.	16	4	221	4	150	97	20	0
April 22, 1882	7	7	236	2	137	93	21	0

Some Curious Things that Happen to our Domestic Animals.—*Chronic Vomiting in an Ox.*—A fifteen-months-old ox vomited regularly its food. Being put on bran-mash, it stopped; but began again with a return to hay. Post-mortem showed a diverticulum in the œsophagus the size of a child's head, filled with dry hay and straw.

A similar diverticulum, with almost complete stenosis of the cardia, was found in an old cow which had also suffered from chronic vomiting.

Stenosis of the œsophagus in a horse was brought about by an inflammatory hypertrophy (?) of the muscular wall.

A Lung-Stomach Fistula.—A cow suffered from chronic indigestion and intermittent tympanites. Post-mortem showed a fistula between the first stomach, the diaphragm and the lung, produced by a rusty nail.

Hair-pin in the Soft Palate.—A horse neither drank nor ate for six days. He was otherwise healthy. A hair-pin was at last found in his soft palate. Upon removal, the animal took nourishment as usual.

A Fatty Liver.—In a fine old English stallion, which had only been fed on hay and oats, a very large and fatty liver was found, weighing over fifty pounds. There were hemorrhagic spots on it.

Intussusception in a Horse.—A horse had for several weeks suffered from constant indigestion and intermittent colic. Post-mortem showed that the cœcum had been forced down into the colon.

Tetanus from unskilful castration was observed several times in young steers by Dr. Heizmann, of Messkirch.

The Result of Clipping.—A fine horse was clipped in the fall of the year. Immediately after, a well-marked attack of pleurosthotonos was observed, which lasted for four weeks.

A fibro-sarcoma within the skull pressed upon the trigeminus, causing paralysis and complete atrophy of the muscles of mastication upon that side. The horse had to be killed.—*Journal of Comparative Medicine.*

Vaccination After Small-pox.—Dr. Archibald Mercer, of Newark, N. J., writes: "Having twice lately observed a reference made to the subject of 'Vaccination after Small-pox' in the columns of the Record, the following may be of interest: During January I was called upon to vaccinate one hundred and six men in a factory in this city. I made a careful note in each case of the date of the last vaccination, and later examined each arm. The men had all been vaccinated at least once before, and some of them several times. Of the number, seven (7) had had small-pox, and in each the vaccination was *successful;* two had had varioloid, the vaccination taking in one instance, and of two, 'inoculated' in infancy, the vaccination was successful in each. Of the total number vaccinated, sixty five (65) had perfect vaccine pustules. The quills used were from the New York Health Department."

Ineffective Vaccine Virus.—Dr. S. M. Mouser, of San Francisco, Cal., writes: "In your number of the 1st inst. is an article by H. J. Garrigues, M.D., on 'Ineffective Vaccine Virus,' in which he says he vaccinated sixteen babies who were from a few hours to a few weeks old, and that vaccination failed in fourteen. Is it certain that this was because of inertness of the vaccine, or is it, rather, the rule that vaccination is much more likely to fail in children so young? The latter has been my experience, so much so that for many years I have not vaccinated a baby under four or six months old, unless there was danger of being exposed to contact with small-pox, in which event I would vaccinate even at birth.

"I believe—and suppose medical men generally do—that there is a happy provision of nature which exempts these tender beings from susceptibility to contagious diseases generally, and with the rest, small-pox and vaccine. There are, however, some exceptions to this rule, if it is a rule. Such has been my experience during nearly forty years of practice.

"In regard to bovine virus, my experience with such as I have been able to obtain—mostly from New York and Wisconsin—has not been satisfactory, and fully corroborates Dr. Garrigues' statement that it is not reliable. Whether it has come to me in a sufficiently fresh condition or not, I am unable to say; but it has generally failed in my hands, while the arm-to-arm process with humanized virus has seldom done so. I also prefer puncture to scraping the surface, which latter operation sometimes misleads the inexperienced by the formation of a scab, the result of mechanical irritation."

The St. Louis Medical Society and the New Code.—The following resolutions were adopted by the St. Louis Medical Society April 1, 1882:

Resolved, That the St. Louis Medical Society, while it desires to accord the broadest freedom to medical investigation, and recognizes fully the right of individuals to form and hold private opinions, hereby declares that it regards with disfavor any steps taken to lessen or obliterate the distinctions and safeguards between an honorable practice of medicine founded upon science and that founded

upon any of the current delusions and exclusive medical systems of the day.

Resolved, That a copy of this resolution be forwarded by the Corresponding Secretary to the New York State Medical Society, to the Permanent Secretary of the American Medical Association, and to several specified medical journals.—Wm. Dickinson, M.D., *President;* A. H. Ohmann-Dumesnil, M.D., *Recording Secretary.*

Chicago Medical Society.—At the annual meeting of the Chicago Medical Society the following officers were elected for the current year: Dr. J. H. Hollister, *President;* Dr. D. W. Graham, *Vice-President;* Dr. L. H. Montgomery, *Secretary;* Dr. E. F. Ingals, *Treasurer.*

Medical Association of Georgia.—The thirty-third annual session convened in the city of Atlanta, at eleven oclock A.M., on Wednesday, April 19, 1882, and continued in session for three days.

Dr. Wm. H. Parish has been elected Professor of Anatomy in the Philadelphia Women's Medical College.

The New York Hospital will not, it is said, build a new receiving hospital in Chambers Street. It is more likely to reduce the present one to a smaller size.

Sir Robert Christison and Digitaline.—At one of the trials in which Sir Robert Christison was engaged, one of the points for the defence was that there was no trace of the poison (strychnia) found in the body. In answer, Sir Robert said he knew of a substance so deadly that a minute dose of it would infallibly prove fatal and yet so subtle that the most careful examination would fail to detect its presence in any of the tissues. He was about to name the substance when the presiding judge begged him to keep so important a secret to himself, lest it should be used successfully for criminal purposes. Sir Robert used to tell in after years how for days his breakfast-table was loaded with letters begging to know the secret. It is now well known, and there is no need for concealing it, that he referred to digitaline, a substance which is not at all likely to be obtained by any but scientific men.—*Edin. Cor. N. E. Medical Monthly.*

An Electric Excitability of the Brain Cortex in hypnotic or trance patients has recently been shown by Charcot to exist. He puts his subjects into a hypnotic sleep. A galvanic current is then made to pass along one side of the cranium, when muscular movements are excited on the opposite side of the body. The cortical motor areas seem to be in a state of hyperexcitability.

New Dentists.—At the Pennsylvania Dental College Commencement, February 25th, there were fifty graduates. Six of them came from Germany, one each from Switzerland and Italy, five from New York, and the remainder from various other States in the Union.

Ergot and Ergotine in Pharyngitis.—The value of the topical use of ergot in chronic pharyngitis has been admitted for some years. Recently a writer in the *Revue Mensuelle de Laryngologie* gives some independent testimony as to ergotine. He recommends the following mixture:

℞. Ergotine	gr. xv.
Tinct. iodine	ʒ j.
Glycerine	ʒ j.

Medical Journalism in Japan.—Dr. Stuart Eldridge, of Yokohama, Japan, writes: "I notice that in your issue of August 6th you acknowledge the reception of the first number of *Idzo Shin Bun*, a medical journal in Japanese, and speak of it as the first of its kind published in the empire. For the credit of the native profession, I am glad to say that the latter statement is incorrect, whether intended to apply to medical periodicals in general or to those of fortnightly issue only. I, myself, established in 1873, and for a considerable time conducted the *Kin Se I Setzu*, or 'Modern Medical News,' which was the pioneer of medical journalism in Japan and was quickly followed by others, so that there are at present at least six periodicals devoted to medical science, issued regularly, exclusive of the new enterprise, the advent of which you have chronicled, two of them appearing fortnightly, the others being weeklies, monthlies, or bi-monthlies. Those curious in the matter can find files of four Japanese journals of medicine on the shelves of the National Medical Library at Washington, as well as a number of treatises upon medicine and surgery by Japanese authors. The six periodicals above mentioned are at present under management exclusively native, and, though chiefly made up of translations and compilations from foreign sources, contain occasional original articles of very creditable character. The exceptional progress of Western medical science among the Japanese, a progress greater and resting on a more solid basis than that made in any other modern science, has created a demand for medical literature in the vernacular which ensures the success of any fairly executed work, be it journal, translated text-book, or original treatise. Many of the leading text-books, both German and English, have been translated and published, and a much larger number will appear within the coming year or two. I hope at an early date to publish a review of Japanese medicine, past and present, believing that the history of a reformation, almost complete, occurring within a few years, will not be without interest elsewhere than in Japan."

Medical Department of the University of the City of New York.—Prof. Herman Knapp has accepted the Chair of Ophthalmology, and will fill the vacancy caused by the resignation of Prof. D. B. St. John Roosa.

The Prophylactic Value of Salicylic Acid in Yellow Fever.—Dr. Walls White instructed the captain of a Brazilian-bound vessel to give salicylic acid to his men when he reaced his destination. On arriving at Rio Janeiro, it was found that the yellow fever was prevailing. Among the one hundred and fifty ships in the harbor, there was not one that had not had from two to four deaths on board. The captain in question gave his men from five to ten grains of salicylic acid daily, for fifteen days, during which time all the crew remained well. The medicine was then stopped for a few days, but as some of the men began to show prodromal symptoms they were put upon it again. The vessel soon after left the port, having had no case of yellow fever.—*El Siglo Med.*

The Skeleton of a Prehistoric Man, at least four thousand years old, is said to have been discovered in the Province of Maranho, Brazil. The skeleton measures eight feet two inches, and the backbone is prolonged in the form of a tail for nearly two feet. The fossil in question probably belongs to the order of the Cardiff giant.

Original Communications.

HYDRONEPHROSIS.*

By GEORGE A. PETERS, M.D.,
NEW YORK.

Case I.—John R. Wallace, nineteen years of age, single, dentist, and a native of the United States, was admitted to the New York Hospital October 1, 1878. The following history was furnished by G. Lee Knapp, general assistant-surgeon:

About eight weeks ago he was taken with a severe chill, which was followed by cramps in the stomach. The abdominal pain lasted two weeks, and then disappeared, but there remained a pain in the left lumbar region which has lasted, with varied intensity, up to present time. One week after the severe attack had subsided he was taken with pain again in precisely the same manner as before. This time, however, the symptoms only lasted two days. For three weeks following there was no return of pain, but at the end of that time it returned with all its former intensity, and has lasted up to this date. He attributes his present condition to the following: Several weeks before admission, while lifting a heavy weight, he felt a most excruciating pain in the back, extending from the lower dorsal to third lumbar vertebra. This, however, only lasted a short time, and he was able to be about his work as usual. At the end of five days he was obliged to take to his bed, from which he has not as yet risen.

The pain now appears to be a severe one in the lumbar region, and is without intermission. The left leg is drawn up in a semi-flexed position and cannot be fully extended. At time of admission the symptoms pointed toward the formation of a psoas abscess—the pain, extreme tenderness, etc. On standing, which is accomplished with great difficulty, the entire weight is thrown on the right leg, and the position of the other is similar to that taken in morbus coxarius. There is a lateral curvature of the spine in the dorsal region, but no pain on pressure, except at one point, and that is at the eleventh dorsal vertebra. Ordered rest in bed and bowels to be kept open; plaster-jacket.

October 4th.—General condition improved, and pain less marked.

October 6th.—Able to straighten left leg; can stand much easier than before; general health good. It has been deemed prudent to omit the plaster-jacket for a few days longer in order to see how much improvement there will be without it.

October 8th.—Allowed to get up. Is able to walk, but not without considerable trouble. General health improving; appetite good.

October 12th.—Severe pain in left gluteal region, which was modified by the administration of quinine.

October 25th.—General condition improved; quinine continued. Still some pain in hip, but only at night, and then not at all severe.

November 1st.—Has noticed for a few days past a swelling in left ilio-hypogastric region. On examination a hard tumor is found there, but slightly movable and perfectly painless. It is distinctly separable from the spleen.

November 10th.—General health improving daily. Tumor still observed, no change whatever being noticed in it.

November 20th.—Tumor seems to have increased slightly in size; no pain however. Fluctuation made out. Patient kept in bed. There is thought to be fluid in the peritoneal cavity.

November 21st.—The tumor was outlined as follows: "Beginning about one half-inch above anterior superior spine of ilium, it could be traced in a direction inward and downward as far as within one-half inch of median line, where its edge could be distinctly made out to form a curve in a direction upward to within one-half inch of umbilicus, and thence outward and upward almost as high as the twelfth rib. It could be made out as far back as the edge of quadratus lumborum muscle, and thence in a direction downward to the point of commencement. There was flatness upon percussion over this area, and a feeling of deep fluctuation. A small aspirating needle (No. 1), with aspirator attached, was inserted one-half inch, the puncture being made almost one inch above anterior superior spine of ilium and one ounce of a clear serous fluid drawn off, which was alkaline, had a specific gravity of 10.08, contained twenty-five per cent. of albumen, and also leucocytes, but no urea. Aspirator did not work well, and over an hour was occupied in obtaining the above fluid. The result was a total disappearance of the tumor both to feel and sight, and where before there was marked flatness normal abdominal resonance returned.

November 22d.—No bad effects due to the aspiration apparently, and patient only complains of being kept in bed.

November 23d.—Slight tenderness on pressure over site of aspiration; countenance flushed and left thigh flexed on pelvis. Temperature, 98.5° F.; pulse, 90 and full.

November 24th.—Febrile symptoms and pain have disappeared. Reaccumulation of fluid; abdominal resonance becoming flat. There is nothing definite, however, about the shape that the new tumor is taking. Temperature, 98.5° F., and feels well.

November 25th.—The tumor has obtained the same size as before, and is again aspirated.

December 4th.—No special change in patient up to this date. He was placed on the right side, and twelve ounces of fluid, having the same color as before, were drawn off. It was thought best not to draw off any more. Examination of fluid revealed the same as before, except that urea was found, which points toward hydronephrosis.

December 5th.—No bad results following the aspiration, the patient was allowed to go out for a ride.

December 16th.—Has been up and about ward as usual. Feels well; appetite good; bowels regular. Tumor as large, if not larger, than heretofore. Commences at anterior superior spine of ilium, outline made out to extend along Poupart's ligament as far as inner one-third, then up abdomen in median line two inches above umbilicus, where it comes out and upward nearly to free border of ribs, and extends behind almost to vertebral column, thence curves down, and then in to point of starting (anterior superior spine of ilium). Patient placed upon left side, and aspirating needle (No. 1) introduced in left lumbar region to depth of two and one-half inches, forty-six ounces of fluid drawn; same in appearance as that heretofore obtained. Some slight pain experienced by patient during the aspiration, but none after the fluid was withdrawn. After the evacuation of the fluid, the hand could be made to press as deeply down into iliac fossa of that side as on

* Read before the New York Surgical Society, February 28, 1882.

the other. No appearance of any tumor present, and where flatness existed before percussion gave normal resonance.

December 17th.—Patient up and about ward. No appearance of filling up of tumor.

December 18th.—Patient complains of slight pain in the back, extending down to the thigh. On examination, it is seen that the tumor is again rapidly filling, and the hand cannot be made to press deeply into the iliac fossa.

December 23d.—Operation 2.30 P. M. by Dr. R. F. Weir. The patient was etherized and laid upon the operating-table on the right side; carbolic-acid spray was directed over parts, which were also washed thoroughly with a carbolized solution (1 to 20); an incision was made, commencing at lower border of twelfth rib, and extending in an oblique direction downward and backward to the crest of the ilium. The tissues were rapidly divided and the quadratus lumborum exposed. An incision was made in this muscle, transversely cutting across its fibres for about one inch. The left kidney was exposed, and recognized by the bluish-gray color presented. A small trocar was introduced, and fluid of same nature as that drawn off by the aspirator was obtained. A free incision was then made into the sac, and it evacuated about forty ounces of thin serous fluid. The finger of the operator was then introduced into the sac, and made to pass for several inches in an upward and downward direction in what appeared to be the distended capsule of the kidney. A large-sized drainage-tube (carbolized), fenestrated for the first two inches of its extent, was introduced into the opening, and made to pass into the cavity several inches. To the free end was attached a large rubber bag filled with sponges (carbolized by previous immersion in carbolic, 1 to 20), which is to be contained within the dressing. Another drainage-tube was placed through the entire length of the wound, and the edges brought together by carbolized sutures; a full Lister dressing was applied, jute being used instead of gauze. During operation the pulse remained good, and half an hour later pulse, 80; respiration, 24; temperature, 98° F.

6 P.M.—Ether sickness slight. Pulse, 70 and feeble; respiration, 26; temperature, 99 F. Complains of cold. Ordered heaters to feet and spt. trin. gall. ℥ ss. every two hours, milk and beef tea ad lib.

10 P.M.—Pulse, 75; respiration, 21; temperature, 101° F. Patient restless, but suffers no pain. Ordered ten minims of Magendie's solution of morphia.

December 24th.—The patient passed a very good night. No pain, but a feeling of discomfort about left side. Takes fluid nourishment and in sufficient quantity. No difficulty in passing urine.

4 P.M.—The dressing was changed on account of discharge, and done under spray. On opening the bag attached to tube, only about four ounces of a bloody fluid were found, and pressure over site of former tumor did not increase the quantity. The wound looks well; dressing same as before. Passes one-third less urine than before, but color much darker, almost black, sp. gr., 1010; albumen 50 per cent. No vomiting nor gastric disturbance present.

December 25th.—No pain; passed a good night. No vomiting, face clear, although slightly flushed. Bowels constipated. Passes normal amount of urine same in character as on 24th. Dressing changed on account of discharge. Wound free from appearances of inflammation; union by first intention, except at opening, caused by drainage-tubes; slight amount of serous fluid had escaped with the rubber bag, and a slight amount, two ounces, at time of dressing, escaped from free end of tube. No pain on pressure in iliac region, and evidently no reaccumulation of fluid in that locality; dressed as before.

December 26th.—Passed a good night. Urine still continues dark, which seems to point toward carbolic acid poisoning, but no other symptoms are present, and $BaCl_2$ test negative. No pain in side, but simply a feeling of soreness on motion. Bowels still constipated; appetite good.

4 P.M.—Dressings changed. Wound perfectly aseptic in appearance, several sutures removed, union firm. Discharge of serous fluid, two ounces, from tube. Dressed as before.

December 27th.—Passed poor night, very restless, but complained of no pain in parts. Pulse, 100; respiration, 20; temperature, 101°. Dressed as before, line of union good. No fluid escapes. No inflammation about wound, sutures removed.

December 28th.—Pulse, 99; respiration, 20; temperature, 100°. Dressed as before; about sixteen ounces of clear serous fluid escaped from end of tube on removal of dressing, which was examined and found to contain urea.

January 3, 1879.—Wound dressed as before. There appears to be a separation of the edges which had already united. Union by granulation going on. Small amount of clear fluid escapes. General condition good; pulse, 100; respiration, 20; temperature, 99 F.

January 4th.—Pulse, 100; respiration, 21; temperature, 99⅘°. Dressed as usual. Good union taking place by granulation. Drainage tube of wound proper removed. Free escape of clear fluid as heretofore.

From this date to January 10th there were no special symptoms developed, and then a small amount of sero-pus escaped from the tube, and about two ounces of the same fluid were found in rubber bag. Antiseptic dressing continued.

January 11th.—Pulse, 100; respiration, 22; temperature, 99.2° F. Slight discharge from wound, which is rapidly cicatrizing. Total amount of urine in twenty-four hours about twenty-four ounces.

January 13th.—Pulse, 99; respiration, 20; temperature, 99.4 F. Dressing renewed under spray. About four ounces of fluid, sero-purulent, found in bag. Weir's flexible silver probe (wet with 1 to 20) introduced into wound and made to pass in a direction downward, forward, and inward, below the brim of the pelvis. A grating sensation was imparted to the hand of the operator by the instrument. A flexible bougie (No. 8 F.) likewise introduced, but only passed to about eight inches, where it was firmly grasped as though in the bite of a stricture. A steel sound, 15 and 21 F., introduced through the wound, but could discover no obstruction. No pain experienced by patient during above examination, and no bad effects followed. Dressed as before.

January 14th.—Pulse, 89; respiration, 20; temperature, 99 F. Passed a good night. No bad effects from exploration of yesterday. Slept well, and wants to get up. Dressed as before. No notable change,

January 15th.—Allowed to sit up in a chair.

January 18th.—No special change since last note. About four ounces of turbid fluid found in rubber bag. Wound apparently healing. Tube left in situ. Dressed as before. Tendency to diarrhœa; ordered pil. opii after each movement.

January 21st.—Pulse, 85; respiration, 20; temperature, 99.4° F. Considerable discharge. Dressed

as before. About two ounces milky fluid found in bag. Wound doing well. Tube shortened about two inches.

January 30th.—Drainage-tube and rubber bag discontinued.

January 31st.—Temperature, 99.4° F. Dressed as usual; dressing is saturated with discharge, which is very profuse. Passes in twenty-four hours about twenty ounces of urine.

February 3d.—Dressed every day up to date. Doing well. Discharge still about the same. Temperature varies from 98° to 99.5° F. General condition slowly improving; appetite fair; sleeps well. Only occasional tendency to diarrhœa.

February 10th.—Dressed every day. Doing well. Still discharge. General health daily improving. Has gained ten pounds in last three weeks; appetite good; allowed to go out and take short walks.

February 12th.—Dressed as usual. Ordered cavity to be washed out with weak solution of carbolic (1 to 100). 1 40 P.M.: Taken with severe chill. Temperature, 103.2° F. during chill; after chill, temperature 103° F.

February 13th.—Pulse, 89; respiration, 22; temperature, 100° F. Feels perfectly well. Dressed as usual.

February 20th.—Dressed every other day. Granulating surface has entirely healed, leaving a small fistulous opening, from which fluid escapes as before. No diminution in amount noted. Patient's general health excellent; eats and sleeps well, and goes out occasionally for a walk.

February 22d.—Opening entirely closed. Coincident with cessation of discharge was a great increase in the quantity of urine passed—in twenty-four hours forty-six to fifty ounces. Dressing re-applied.

February 26th.—Opening still closed. Dressing discontinued. Urine still increased in amount—about fifty ounces in twenty-four hours. Feels perfectly well.

February 27th.—Discharged cured.

Note of Dr. Weir (January 10, 1880). — Sinus closed entirely June, 1879, and has since remained so.

Case II.—Margaret Hallman, born in Germany, aged forty-seven, married. Was admitted into St. Luke's Hospital, August 19, 1880.

Patient's previous history good, with exception of prolapsus uteri after birth of her last child. About four years ago patient noticed for the first time "a lump" about the size of a hen's egg in the median line of the abdomen, about two inches below the umbilicus. This has continued to increase in size since that time, but has grown more rapidly for the past two months, during which time it has increased to double its previous measurements. The abdomen is very much distended in the hypogastric, inguinal, and lower part of the umbilical regions. The tumor is somewhat ovoid in shape, measuring sixteen inches in its transverse, and twelve and one-half inches in its vertical diameter. On the surface of this abdominal enlargement can be made out the transverse colon and a coil of small intestines lying just beneath the abdominal wall, and freely movable over the surface of the tumor. The left upper half of the swelling is occupied by a globular mass, measuring about seven inches in diameter. To the touch it is tense, but distinct fluctuation can be made out, and it is somewhat movable. She has occasional pains in this region, but not very severe in character; also has "dragging pains" through the groins, but her principal pain is in the small of her back. The bowels are habitually constipated, appetite fair, and she sleeps well. Patient was seen in consultation by my colleagues, Drs. Little, McBurney, Sabine, and Bull; also by Drs. Sands, Emmet, and others. It may be well to state here that the patient was sent to the hospital as a case of ovarian tumor, favorable for operation. A careful examination with the finger in the vagina and conjoined manipulation, revealed the fact that the tumor had no connection with either the uterus or ovaries.

The finger introduced into the rectum would just reach the lower border of the tumor, on a level with the promontory of the sacrum.

In order to make diagnosis more clear, I determined to explore the cavity with the hand introduced into the rectum. On October 19th, my friend and colleague at the hospital, Dr. T. T. Sabine (who has a hand peculiarly well adapted for such an exploration), the patient being etherized, passed his hand into the bowel, and by conjoined manipulation could distinctly feel both ovaries. He was enabled to move his left hand freely about in the renal region, and in that situation recognized a large movable mass, which seemed to be a cyst connected with the left kidney.

I determined to operate by cutting down in the lumbar region, open the sack, and stitch it to surrounding skin, hoping by this means to procure a final obliteration of the sac.

On the 12th of November, 1880, I operated, Drs. Sabine and McBurney assisting, in the presence of Drs. E. Mason, Weir, Post, Little, Emmet, Otis, Sands, Briddon, Pallen, and others. An oblique incision about four inches long was made in the left lumbar region, extending from border of rib to crest of ilium, about three inches from the line of spinous processes of lumbar vertebræ, and parallel with border of quadratus lumborum muscle. The dissection was carried down carefully behind, and to outside of the peritoneal cavity, until the surface of the tumor was reached. It was not determined that there was any kidney-structure in the exposed wall of sac. With a hypodermic needle I punctured and drew off a small quantity of clear fluid, thus demonstrating that the sac had been reached. With a sharp, curved bistoury I made a free opening, which was immediately followed by a flow of bloody fluid, welling up into the wound. The edges of the wound in walls of the sac were then brought out and secured by fine carbolized silk sutures to the edges of surrounding skin. A rubber drainage-tube was then introduced some six inches into the sac, one end being left free at the opening; also a smaller and shorter one in the external wound, both ends of which projected, one at the upper, the other at the lower angle of the wound. The edges of the cut were then brought together with fine carbolized silk sutures. Wound well washed out with carbolic solution, 1 to 60, covered with "protective," a mass of carbolized jute, to absorb the discharge, and over all a Lister dressing.

The fluid which came from the opening made in the sac was very considerable in quantity. Only about six pints were saved; the remainder was lost. The fluid contained a quantity of blood, as evidenced by large clots after it had stood a while. Before the dressing of the wound was completed the patient became very much exhausted; pulse small and rapid, respiration sighing, and temperature fell to much below the normal standard. Brandy was ad-

ministered hypodermically, and she was left upon the operating-table until she should rally sufficiently to make it safe to remove her to the ward. By 8 o'clock P.M. patient had rallied considerably, being able to take brandy and milk by the mouth. Temperature, 95¼°; pulse, 84.

November 13th.—Patient a little stronger. No vomiting during the day. The discharge having oozed through the dressing, it was reapplied. Morning temperature, 103½; pulse, 136. Quinine and morphine were administered. Evening temperature, 99¼°. Dressings were changed daily, and the cavity of the cyst was washed out with weak solution of carbolic acid by means of a syringe.

November 15th.—The belly became very tympanitic, evidently caused by the decomposition of blood clots in the cyst cavity, and not by peritonitis.

November 29th.—All sutures were removed and the drainage-tube taken out from the sac. Several large pieces of a cheesy material, with a very offensive odor, were found adhering to it.

December 14th.—The washing out of the sac was discontinued. A small pad and compress were applied over the opening, and the patient allowed to sit up.

Patient remained in the hospital until January 27, 1881, when she was discharged. During all this time she had a fluctuating temperature, ranging from normal to 104°. Her pulse, however, did not correspond with the temperature. Her appetite was good, and she gained in health and strength. When discharged there was an opening only sufficient in size to admit a small silver probe, which could be passed in for an inch or two, and could not be moved about, showing only a narrow sinus.

The fluid which escaped during the operation yielded, to microscopic examination made by Dr. Satterthwaite, "small, round bodies like fat globules, hæmatoiden and flab cells with large, dark, opaque nuclei." It also contained urea.

February 24, 1882.—The patient called upon me a few days ago to report. Since leaving the hospital she has been able to do her daily work, and is in good health and strength. The sinus still remains, through which a little urine continually dribbles, and keeps the pad which she wears over the orifice moist, but gives her no serious inconvenience.

Remarks.—Hydronephrosis is a disease not frequently observed, as I am enabled to recall to mind but few cases in a hospital experience of over thirty years. Operative interference is but seldom resorted to. The greater number of the cases which we see are treated for a time, and are either relieved or become chronic, and pass from under observation. Here are two cases presented, occurring one close upon the other, which have been cured by operation and the patients saved from a probably fatal termination in rupture and peritonitis. The operation in both cases was performed in the same way with but slight difference in the methods of procedure. In Case I. (John R. Wallace), the treatment by simply tapping and emptying the sac by aspiration was tried, but without permanent good. From November 21st to the day of final operation, aspiration was done five times, and fluid was drawn off, in quantities varying from one ounce to forty-six ounces. The sac rapidly refilled after each tapping.

In this case of Dr. Weir's the opening was made through the lumbar region into the distended sac, and drainage was secured by the introduction of a rubber tube through the wound, which tube was worn for nearly six weeks, while in my case the edges of the sac were secured by sutures to the edges of the skin cut, where it healed and enabled me to withdraw the tube at end of the third day. In Dr. Weir's case the wound healed entirely in six months, and had remained closed up to January 10, 1880, at which time the patient presented herself for inspection, a period of over six months, and for aught we know to the contrary is still closed.

In my case the sinus remained open from the time of the operation until a short time ago, when she presented herself at my office, a period of over a year. The sinus is very shallow and the discharge is simply an oozing, and it may fairly be expected to improve still more. The advice given by some of my surgical friends, who had had much experience in laparotomy, was to attack the tumor from the front by free incision in median line. This advice was founded on the fact that the tumor was very large, was well defined, and could be more easily reached through that incision, and that the opening through its wall could be easily stitched to the surrounding skin. My reason for preferring to attack it from behind was that I could reach it with sufficient ease through such a cut, and should thus avoid the danger of having at some future time strangulation of any portion of the intestines which might possibly become entangled in the bands of adhesion which must necessarily exist between the cut edges of the sac and the anterior abdominal wall. I see no reason to withdraw my preference for the posterior incision.

In Case II. (Margaret Hallman), the opening of the sac was followed by a hemorrhage so profuse as to reduce the patient's strength to a very low ebb. This hemorrhage was not from any vessel divided by the knife, but apparently a passive oozing from the sac wall, such as sometimes occurs from drawing off suddenly the contents of a large abscess or from tapping in ascites, and is an accident for which the operator should be prepared. There is one little point of practice to which I wish to call the attention of any one who desires to repeat my operation. After the incision through the skin had brought me down upon the surface of the tumor, I introduced a small hypodermic needle in search of fluid, having found which I passed the blade of a bistoury beside the needle and made my incision into the sac. This incision slipped easily away, and it was with considerable difficulty that I was enabled to find it. Had I thrust a curved needle armed with a double ligature through the sac wall, as we do in lumbar colotomy, I should have escaped that annoyance.

The method of securing the drainage from the sac into a sponge secured in an india-rubber bag, practised by Dr. Weir, was ingenious, but the method which I adopted was just as effectual, and much less troublesome. I used the Lister dressing but a few days, nor would my past experience lead me to lay much stress upon its employment for a longer time.

Case III.—Sophia Roskey, twenty-seven years of age, a native of Denmark, was admitted to the service of Dr. George A. Peters, at the New York Hospital, December 24, 1881. The notes of the history are furnished by Dr. Vanderpoel, senior assistant-surgeon. She applied in person for admission. No specific, alcoholic, or rheumatic history. Family history good. Four and one-half years ago the patient was married; previous to that time had always been perfectly healthy and courses regular. Six months after marriage, signs of pregnancy de-

veloped; menstruation ceased, was salivated, had morning vomiting, breasts enlarged slightly, and primary areola appeared. When pregnant three months, she sustained a fall of about four feet, striking the right side of the abdomen against some prominent object. Was taken immediately with intense pain, nausea, and vomiting, and in about one hour a profuse, bloody discharge appeared from the vagina. No membranes or evidence of a fœtus were observed, although the patient had well-marked labor pains.

Discharge and pain gradually ceased, and two weeks after the accident she was up and about again.

Two weeks later the patient had another attack of pain, with vomiting and a bloody discharge, which lasted but a few days. After, she was perfectly well for about eight months, menstruation being quite regular. Breasts had become smaller, and all signs of pregnancy had ceased. Pains then, however, began again, and on examination a mass was detected on the right side, about half the size of the present tumor. This slowly grew, occasioning periodical attacks of pain, which occurred at about the time of her monthly illness. Her condition continued about the same for several years, until eight months ago the patient came to America, when the pains increased in frequency, and became more active, especially at night, lasting for several days.

For the past month or so the attacks have occurred daily, with more or less vomiting, which, during the three or four days previous to admission, was streaked more or less with blood. Since the tumor appeared it has slowly, steadily, and uninterruptedly increased in size, and extended toward the median line in front. She has lost no flesh, and her bowels have been regular. No urinary symptoms, no pain during intercourse, and no signs of pregnancy since the accident. Suffers no backache, or headache, and no œdema of the feet. Jaundice has never occurred, and patient is not hysterical.

On admission, she was fairly nourished: her general condition good. The above-mentioned symptoms were present, occurring every night; but she has no fever, and her pulse is good.

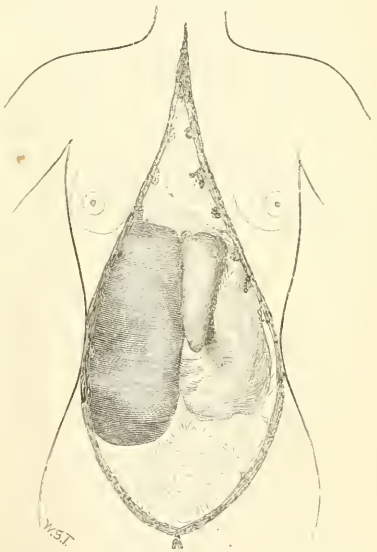
Examination showed an ill-defined mass situated in the right ilio-lumbar region, giving no marked fulness or swelling, and extending from within one inch of the umbilicus, where dulness began, almost as far down as the crest of the ilium below, and to the free border of the ribs above, where the dulness emerged into that of the liver. The lower limit corresponded with a line just above the anterior iliac spines, and the posterior with the axillary line. The size of mass from behind forward, six and one-half inches; and from above downward, four and one-half inches; the greatest breadth being anterior near the median line, giving a somewhat pyriform shape with the base forward. On manipulation, much pain and tenderness were experienced, and deep palpation gave an obscure sense of fluctuation.

When the patient was upon the left side, the mass falls somewhat in that direction, percussion then giving a somewhat tympanitic note from the intervention of the gut.

Since admission, the pains have continued and increased somewhat, and the amount of blood in the vomited material has also increased. She sleeps but little, although anodynes are administered in large quantities nightly. Patient is losing flesh. Bowels have been regular, and movements well formed. Urine is acid; its average specific gravity is 1016; its color is amber; it contains no albumen, but a slight amount of mucus. Average amount passed daily twenty-seven ounces.

Treatment.—The patient was etherized, and an operation performed January 7. Patient laid upon the left side, and an oblique incision made, extending from three inches external to the spinous processes on a level with the last rib, downward and ontward to the middle of the crest of the ilium on the right side. The superficial fascia and tissues were then cut through down to the margin of quadratus lumborum, and the layers of the abdominal wall divided as they presented themselves. The dissection was then carried through the fine layers of areolar adipose tissue which lay immediately below, when a fold of what was supposed to be intestine, with its covering of peritoneum, presented itself; this was pushed one side, and another supposed layer of areolar tissue cut up on a director. The finger was then introduced into the cut, and a large, firm, solid mass detected, apparently about the size of a fist, but nothing that gave a sense of fluctuation could be felt.* The mass was grasped by vulsellum forceps, and drawn toward the edge of the wound, the finger introduced, and surrounding tissues separated.

Traction was now made, but the mass seemed immovable. The whole hand was introduced, and found to be in the general peritoneal cavity, whence the anterior free border of the liver could be felt adjacent to the part operated upon. Further interference was now deemed unadvisable.



A fenestrated drainage-tube was inserted for about four inches into the wound, and the surrounding parts were washed freely with 1 to 4 carbolic acid, none, however, being admitted inter-

*This was determined, by the consent of Drs. Markoe and Weir, to be the kidney, and it was deemed best to pursue the dissection, with the removal of the kidney in view.

nally. The wound was sutured with fine carbolic silk sutures, and full Lister dressing applied. The operation was done under the spray, and hemorrhage was very slight. The patient was returned to the ward and stimulated hypodermically.

The pulse during the operation was very good, but afterward became very weak, and temperature fell to 95° F. The patient died January 8, at 6.30 A. M., of shock and heart failure.

Autopsy.—January 8, 1882, 11 A.M.—At the autopsy the body was anæmic, though fairly nourished, and rigor mortis was well marked. Very slight œdema in both lower extremities. In the right lumbar region there is an incision three inches anteriorly to spinous processes of vertebræ, and running in a diagonal direction from the free border of the ribs to the crest of the ilium.

Brain and membranes not examined.

Abdomen.—The right lobe of the liver extends in the mammary line, 12 ctm. below free border of ribs. Lower border of liver is on a level with anterior superior spine of ilium. Lower border of right lobe of liver is lacerated and hemorrhagic; remainder of surface that can be viewed without disturbing organ is anæmic. The transverse colon with its omentum lies two inches below umbilicus. The fundus of stomach occupies the left hypochondriac region; the most dependent portion (two and a half inches above pylorus) is on a level with the umbilicus. The left kidney is about in the normal situation, its upper border being on a level with the plane of the fifth intercostal interspace on the anterior surface of the thorax, its lower border reaching to the plane occupied by lower border of ribs in the axillary line. The right kidney extends between the same limits, but is half an inch nearer the median line. Peritoneal cavity contained about six ounces of blood. There were no evidences of peritonitis, but peritoneum in front of internal opening of above-mentioned incision was stripped up for an area of about four square inches toward the median line, and the mesocolon of the caput coli and the ascending colon are hemorrhagic.

Ovaries.—Both ovaries enlarged. Right ovary, five inches by three and one-third inches; left ovary, three and one-half inches by three and one-half inches.

Liver.—Weight, 1,500 grammes. Breadth at broadest part, 21 ctm., of which lower lobe occupies 9. Length: Right lobe, from coronary ligament to lower extremity of lobe, 27 ctm.; of left lobe between the same limits, 16½ ctm. Liver presents on its anterior surface a marked transverse constriction. Lacerations are all at lower extremity of right lobe, and penetrate in places to a depth of two inches. On section the liver appears to the naked eye to contain a slight excess of connective tissue.

Kidneys, intestines, spleen, stomach, and uterus normal. Heart markedly fatty, as determined by microscopic examination.

Remarks.—Our failures as well as our successes should be published. Indeed, statistics are of little value, where only successful cases are recorded. The case of Sophia Roskey, which I have just read, teaches that accuracy in diagnosis is exceedingly difficult to secure. I was very confident that I had a case of hydronephrosis to deal with, in most particulars closely resembling the two cases which I have reported this evening. The history and the physical geography of the patient pointed in that one direction. She was examined by all my colleagues—Drs. Markoe, Sands, Weir—and by many other surgical friends. After careful inspection, we all reached the conclusion that it was a case of hydronephrosis, and a proper one for operation. In particular did all agree as to the existence of distinct fluctuation. In this case I omitted to make manual examination by the rectum for the reason that my patient was small and delicate, and complained of much pain after but slight handling of the abdomen. This led me to think that the walls of the cyst might be thin, and in danger of rupture from such an examination. In this view I was supported by my associates. Had the examination been made, I very much doubt that it would have saved me from the error into which I fell. The hand, on being pushed up into the renal region, would immediately have come in contact with a body in that region in all respects, in so far as I can appreciate, resembling in feel and position an enlarged kidney. Possibly the absence of fluctuation might have been determined, in which case it is possible that the operation might have been done more in view of that fact. When the incision let me down upon what was supposed to be the kidney, not one of us engaged had a doubt that it was that organ which presented at the bottom of the wound. Color, feel, and all. The apparent increase in size seemed to be due to some diseased action. Up to this time we were all confident that the wound had not penetrated the peritoneal cavity, and it was only on pursuing the manipulation still further, with the intention of getting the entire kidney in my grasp, and, if necessary, removing the organ, that I found myself in the cavity and upon the surface of the liver.

Up to this time no portion of intestine was in view, although I must have entered the cavity early. When it was evident that it was the liver which presented, the kidney was found with some difficulty, apparently crowded up under the ribs, and not presenting in the usual position. Had I recognized the liver earlier, I should have handled it less roughly, and sooner have closed the wound. The amount of displacement and malposition of liver and stomach revealed by the autopsy was such as I had never seen before, and was possibly occasioned by constant tight-lacing from early youth.

The drawing which accompanies this was made by Dr. Thompson, Junior Walker on the medical side, and very faithfully represents the appearances of those organs. I wish that the teachings of this case made me feel that it would be impossible to make the same mistake again. I much fear that under the same circumstances and surrounding I might repeat the same error.

Defective Hearing in Children.—Dr. Weil, of Stuttgart, has during the last two years examined 4,500 school children in reference to their hearing. The examination, which included boys and girls of all social classes, yielded the following results: (1) defects of hearing are exceedingly common; in the public schools, thirty per cent. of the children were found to have imperfect hearing in one ear, while a still larger percentage were found not normal; (2) among the children of well-to-do-parents, the figures are more favorable than among those of the poor; (3) the percentage of defective hearing increases with age; (4) country schools yield relatively better results than city schools.

Reichard, of Riga, has examined 1,055 children, using the water-test, and found 22.2 per cent. with defective hearing in one or both ears.

ON THE LIMIT OF SKIN VITALITY.

By E. P. BREWER, M.D., PH.D.,

NORWICH, CONN.

Sparsely scattered through the medical literature of the past century are found details of crude experiment in transplantation. Though it seems to have been established that the epidermis might be wholly severed from its organic supporters and reacquire its connections if placed immediately in situ or upon a healthy granulating surface, yet the results of the operation were so indefinite and unsatisfactory that prior to the experiments of M. Reverdin at La Charité in 1869, it was regarded of little value beyond an interesting physiological demonstration. However, his practical method and splendid results gave the subject new impetus, which now, after the expiration of nearly thirteen years, is still unimpaired and echoes in clear harmony the tones disseminated from La Charité.

In general hospital practice very few surgical procedures are more frequently used or of greater value than transplanting. It forms a royal pathway, as it were, to the correction of the accidents of sloughing which are so embarrassing in surgical practice. Our unfortunate skin-sloughings in flap amputations are replaced with wonderful rapidity; the immense ulcers incident to superficial gangrene are healed in weeks, where otherwise, if they healed at all, months would surely be required; our healthy granulating ulcers close as if touched by the magician's wand. Hence skin-grafting becomes a justifiable and successful routine practice.

One of the main elements of success was formerly regarded to reside in the immediate application of the fresh skin, but more recent experiment seems to fairly establish that this view is erroneous; in truth it is a matter of common observation that the skin obtained from amputated members four or five hours after the operation is equally successful as the fresh graft. Later, however, experimenters have utilized skin obtained from the dead body, and, strangely, with good success.

As a legitimate offspring of these observations the inquiry has arisen, What is the extreme duration of vitality in the skin? or, What is the limit of skin vitality?

To determine this mooted question to our own satisfaction, we entered upon this series of observations, in which we have exercised much care to select cases that would serve as unequivocal criterion.

Arranging our cases to exhibit progressive elapse in time from the removal to the application of the graft, we will invite your attention to the first one.

Case I.—An Irishman, aged forty-five years, of intemperate habit and free from specific taint. Upon his left leg over the anterior tibial muscle is a pale glistening ulcer about two inches square, covered with a thin and scanty secretion. This he states has existed ten months, and owed its origin to a severe bruise. Submitted to the iodoform dressing, granulations sprung up abundantly, and the discharge became purulent.

Now carefully dissecting a piece of skin from a recently amputated leg, we folded it in a piece of paper and laid it away in our commode for eighteen hours. Then, placing no restraint upon the patient's movements, we grafted after the usual manner.

After the expiration of four days we removed the dressings and irrigated cautiously with carbolized water (1–100). Changing the dressings every second day, we watched for the radii from the grafts. Upon the eighth day they were distinctly visible to the eye. Knowing the number of the grafts used and enumerating the number of grafts presenting radii, we found that the proportion of four out of five grafts survived, a twenty per cent. mortality. Repair progressed favorably, and on the fifteenth day the ulcer was closed.

Case II.—Our next case presents no interesting peculiarities. He is of Irish parentage, aged thirty-eight years, intemperate and of good physique. His ulcer, which is on the right leg, near tuberosity of the tibia, is a healthy granulating sore, one and one-half inch long and one inch wide. Contrariwise our grafting material has a very peculiar history, which is briefly as follows: About 9 o'clock one evening we were called in haste to visit a patient with hæmoptysis; our efforts were useless and he died soon after our arrival.

The following day at 2 o'clock we held an autopsy (both lungs contained cavities, and tubercle was found in the mesentery, lungs, and liver). Before closing the abdomen, I cut from it some of the integument, and carefully rolling it in paper, put it in my pocket. Entering at once upon urgent duties, it was forgotten until the following morning.

Then, between 9 and 10 o'clock, thirty-six to thirty-seven hours after death—nineteen hours of which it was carried in my pocket—I proceeded to graft case No. 2. Following the method adopted in our previous case, I found that on the eighth day the fila were very abundant. On counting the grafts, three out of five had survived. Reparation was complete on the fifteenth day.

The result obtained in the face of such glaring disadvantages exceeded my expectations, and encouraged me to further investigations.

Selecting uninjured integument from the dorsum of a recently amputated foot, I wrapped it in moist cloth and laid it in a cool place. At the expiration of thirty-five hours I grafted a healthy ulcer three inches long by one inch wide, occurring on the person of an Englishman (Case No. 3), forty-two years of age, and in perfect health and constitution. The mortality among the grafts surpassed all my previous cases, reaching 50 per cent. Notwithstanding, healing seemed unimpaired, the thirteenth day finding the ulcer closed.

From the same integument, at the end of forty-five hours, I laid grafts upon an eminently promising surface left by the separation of the slough of superficial gangrene.

The patient, a Swede (Case No. 4), thirty-eight years of age, temperate, and of good health and habits, received a severe and extensive contusion on the left leg. Erysipelas developed, on which superficial gangrene supervened. The slough left an ulcer ten inches long and five inches wide, copiously granular and bathed in laudable pus.

Three days after transplantation the grafts were in place and seemingly normal. Removing one, I carefully washed it in water, to remove extraneous matter, placed it on a glass slide, and divided it with a scalpel. With a ½-inch objective, we discerned infiltration and granular cells $\frac{1}{250}$ inch in diameter, gifted with unmistakable amæboid movements. Acetic acid made the cells more diaphanous, thus rendering the granular condition more distinct, but otherwise no change was apparent. On the fifth day the macro- and microscopic phenomena were unchanged. Examining the case on alternate days, it was not until the ninth that fila

appeared, and then from only twelve grafts; development proceeded slowly for four days, then ceased, the fila disappeared, and the last graft fell off on the twentieth day. Although these twelve grafts stood with indubitable evidences of vitality, the vast majority implanted showed a singular disposition to adhere, and, had it not been for the searching inquiry on the ninth day with a powerful hand magnifing glass, we would not have hesitated to have looked upon the case with a fair hope of success. The results, negative in total, confirmed the suspicion.

The ulcers in both cases were unquestionably well adapted to support the life of the grafts; both cases received equal care and the same grafting material.

The first healed, the second remained open; the first prospered on grafting material thirty-five hours old, the second failed to nourish material forty-five hours old. Conceding the limit of viability in this specific specimen narrowed to ten hours, the objection of grafting upon two individuals is pertinent, and must in justice be considered.

To this end, we selected a chronic ulcer, four inches long and two and one-half inches wide (the result of a burn), on the arm of a healthy Irishman (Case No. 5), thirty-six years of age. Taking integument from a still-born babe at full term, we grafted the lower half in thirty-six hours and the upper in forty hours respectively. Dressing according to our usual custom for the first time on the fourth day, and afterward on every second day, nothing distinctive occurred until the eighth day. Now thread-like fila branched from the lower grafts; the upper remained unchanged. On the tenth and twelfth days on the lower half the fila increased and became confluent, while on the upper the grafts fell off one by one. In eighteen days the lower half of the ulcer was entirely healed, the upper half being open and devoid of grafts.

The objection of grafting upon different individuals is no longer available. Responsibility of viability is transferred from the person to the graft itself, and in turn is credited to the *time-element of the graft*.

A thirty-six-hour graft framed a successful career, the forty-hour graft died and was exfoliated.

Purporting to draw the limit still closer, we regrafted the surface with healthy integument thirty-eight hours old. The result proved disastrous. In eight days not a single graft remained to tell the tale. Obtaining from the same source another specimen, I again regrafted in the same manner as before, using a thirty-five hour graft. From these fifty per cent. survived, development progressed normally, and in fourteen days the ulcer was totally healed.

Formulating our cases for comparison, we have the following statement:

Experiment.	*Age of grafts.* Hours.	*Result.*
1	18	Successful.
2	36	Successful.
3	35	Successful.
4	45	Unsuccessful.
5	36	Successful.
6	40	Unsuccessful.
7	38	Unsuccessful.
8	35	Successful.

Of the eight experiments, five were successful and three unsuccessful. In the successful cases the time elapsed was in one case eighteen hours, in two thirty-five hours, and two thirty-six hours; in the unsuccessful, one each of thirty-eight, forty, and forty-five hours. Although in three instances the grafts were removed from the dead body, yet, in consequence of dissolution being the result of accident, they may with perfect propriety be classed and discussed with those removed from the living body.

In presenting these cases, that so favorably compare even to the published statistics of transplantation with the fresh graft, I am well aware that few surgeons regard the procedure as trustworthy. But from our own experience we are inclined to refer the failure to lack of care in selecting the cases; for whenever we have grafted upon a surface of free granulations, bathed with laudable pus, success has been uniform: on the contrary, our grafting upon surfaces of other character has credited variable and generally unsuccessful results. Confessedly the most striking feature in our cases is the long maintenance of vitality in the grafts. Comparing their course of development with a typical case, no deviation in time of development nor permanency of cure is determined. It is established, if a graft lives, it develops after a given ratio, varying only with the idiosynerasies of the individuals on which it is placed.

In the forty-five-hour experiment (Case No. 4), as previously explained, twelve grafts developed fila on the ninth day, retained them four days, and then fell victims to degeneration. The explanation of this phenomenon is not altogether plain. From extensive observation I have determined that *fila are not developed until blood-vessels actually penetrate the graft*. Hence, by these grafts developing fila, we are constrained to believe that blood-vessels actually penetrated the grafts; and if blood-vessels penetrated the grafts, they must have been encouraged thereto by at least a few live cells. Then followed the degeneration. Possibly the predominance of dead cells so affected the blood-vessels that their growth was paralyzed. Be that as it may, the observation remains a stubborn fact.

Each and every experiment with grafts thirty-six hours or less in age, when placed upon a *favorable* surface, have been wholly successful; beyond this period the ultimate result has been a failure. While awaiting the results of cases complementary to the above, we consider thirty-six hours as the established duration of vitality of the skin, with a possibility of its being extended under auspicious circumstances to forty-five hours.

Do Southern Hogs have Trichina Spiralis?—In response to an inquiry of the above nature quoted from the *Journal of Comparative Medicine*, Dr. A. G. Smythe, Sanitary Commissioner of Mississippi, informs us that he has found trichinæ in the flesh of a hog in that State. Our correspondent reports only one case, however, and adds: "In a practice of nearly half a century among swine-eating people I have not met with a single case of what there was any reason to suppose was trichiniasis caused by the use of swine's flesh which had been raised and slaughtered in the Southern Atlantic or Gulf States, but have seen several cases supposed to have been caused by the use of dried salted meats from St. Louis, Mo. But in no case did it prove fatal, and there was no post mortem, and therefore no positive proof that any case was true trichiniasis."

CELLULO-CUTANEOUS ERYSIPELAS IN THE CERVICAL REGION,

With Subcutaneous Slough of Vein—Recovery.

By H. J. RAYMOND,

ASSISTANT SURGEON, U. S. ARMY.

An Italian, aged thirty-eight years, of debilitated constitution, came under my care in July, 1881, while in charge of the erysipelas tent connected with Bellevue Hospital. Patient, who was brought in on a stretcher, gave a history of an attack of cervico-facial erysipelas of six days' standing, and the sudden development of a swelling just below the angle of the jaw. This abruptly appearing tumor made its advent the night previous to admission, and had gradually increased from the size of a goose-egg to a medium-sized gourd, measuring eight inches in its long diameter and extending from lobe of right ear to the left sterno-clavicular articulation, making pressure upon the pharynx and trachea, thus embarrassing respiration and rendering deglutition difficult. To insure mechanical rest to the injured part, nutrition was kept up per rectum, and the head was couched snugly on a pillow, the patient being strictly enjoined to keep the head in statu quo.

The strict compliance with this injunction on the part of the patient for almost a fortnight seemed the working out of his own salvation.

The muriated tincture of iron, quinia, and brandy were administered in liberal quantities.

The case seeming desperate, Dr. Frank H. Hamilton, at my solicitation, kindly consented to see the patient and give me the benefit of his own experience and judgment. After an inspection of the tumor and a few interrogatories to the patient, the Doctor gave as his opinion that a subcutaneous slough of a vein in the cervical region had taken place subsequent to and caused by the erysipelatous process; that only a ghost of a chance was held out to the patient for his life, namely, that the skin would not ulcerate too soon for the formation of proper clots in one or more of the subcutaneous patulous veins. Thirty-six hours subsequently the skin ulcerated through and a pint of dark grumous blood oozed out, the tumor disappearing. Dried sulphate of iron was used as a hemostatic by being sprinkled over the ulcerated surface, which within twelve hours gradually increased in area to the size of a man's hand.

To prevent sepsis, the cavity was gently packed with carbolized lint, moistened in a two and one-half per cent. solution of carbolic acid, and all precautions taken to keep the wound clean that were permissible under the circumstances. The slough was so deep as to lay bare the common carotid artery, which could be felt to pulsate immediately under the finger.

Ten days later, small, bright red granulations began to spring up in the bottom of the wound, and its surface took on a healthful appearance.

After the lapse of three months, the filling up with granulation tissue was completed, and the superficies skinned over.

It is important to observe that rest—"absolute, unconditional, and complete"—of the disorganizing tissues of the cervical region was secured by suspending deglutition, allaying cough, prohibiting articulation, and enjoining the maintenance of the head in a comparatively fixed position, and that ulceration of the skin was retarded by the removal and exclusion of all dressings causing the slightest pressure upon the tensely stretched skin.

On the other hand, as between Scylla and Charybdis, while warding off exhaustion by hemorrhage, the non-evacuation by the bistoury of the pent-up admixture of putrefying blood and ichorous pus, and the possible existence of a suppurative phlebitis portended a fatal issue in the probable putrid systemic infection through the open mouths of the veins, and the suppurative action going on in their interior.

This issue was happily averted, as was also a fatal termination from hemorrhage, inanition, asthenia, or other untoward consequences of a deep-seated phlegmonous process in so vital a region of anatomical relations.

Alcatraz Island, Cal.

OSTEITIS OF THE FEMUR—SUBCUTANEOUS PERIOSTOTOMY—RECOVERY BY RESOLUTION, WITH REMARKS.

By J. BLOCK, M.D.,

KANSAS CITY, MO.

The following history presents a case suggesting the above title. Infant W—— was born in December, 1880, and is the sixth child of healthy parents whose family history does not reveal anything of importance referable to heredity. From the statement of its mother I learned that the child, although deprived of breast-milk from birth, enjoyed remarkably fine health, being plump, well developed and nourished up to the fifth or sixth month of its existence. These exceptions to the previous remark were however observed. At intervals it seemed distressed on voiding urine, the quantity being reduced and high in color, yielding, however, to the administration of domestic remedies. After having attained the age of three months, it was remarked that it did not display the active motility usually observed in young infants at this period, and that it was intolerant of pressure to the plantar surfaces of either foot, seemingly avoiding play-tapping of these regions, with a marked degree of aversion.

During May and June of 1881 it suffered from dysentery, after having been removed from Kansas to this city, for which it was treated by a prominent practitioner of this city. At this time its lower middle incisors made their appearance. Although it made a fair recovery from its enteric trouble, the child progressed but slowly, and I first saw it when suffering from a diarrhœa in July. Subsequently, it again came under my observation for what seemed to be a dysuria. It was at this time that my attention was called to its inferior extremities.

Upon tapping the sole of the left foot, the infant would cry and sometimes shriek with pain. Although a similar distress was manifested on repeating the process on the right foot, it was decidedly less in degree.

A thorough examination of the ankle, knee, and hip-joints found nothing abnormal presenting in or about these articulations. The vertebræ were free from evidences of disease, and the long bones of the extremities did not seem to be undergoing any pathological change. No evidences of traumatism was elicited.

Late in September of the same year the infant suffered from a pyrexia that was intermittent in its course, terminating in a profuse diaphoresis. It would not yield to aconite, but a tolerably liberal

exhibition of quinine seemed to cut it short. Its duration was three days. It might be added that some time previous to this fever, the upper incisors made their appearance.

On October 8, 1881, the left thigh began to swell, and the next day, on being called to the little patient, I found it with an anxious countenance and an accelerated pulse, but no elevation of temperature marked the onset of this condition at the time. The left lower extremity, notwithstanding the restlessness of the little sufferer, appeared instinctively immobile. The left thigh presented a pusiform appearance, the tumefaction being greatest at the centre of the shaft of the femur, gradually approaching the normal level as it encroached upon the epiphyses. The surface was neither reddened or hot, but presented a mottled appearance, firmly resistant and exquisitely tender to touch. At its centre the tumor was about twice the circumference of the opposite thigh, although the swelling had made its appearance in the short space of a few hours. The surface of the thigh was uniformly smooth, with an absence of fluctuation everywhere.

The next morning, the 10th inst., after deliberating in consultation with Dr. Halley, it was determined—having concluded that the case was an osteoperiostitis—to relieve tension by a periostotomy. Owing to the frail and unpromising condition of the little sufferer, we agreed to limit the operation to a subcutaneous incision. This was also looked upon as an exploratory measure. After the administration of chloroform the puncture was made immediately internal to the external hamstring and over the external condyle down through the periosteum upon the surface of the femur the entire length of its diaphysis. The operation was done under the spray, a tenetome being the instrument employed. Nothing but a little bloody serum exuded from the wound. The shaft was felt roughened as though covered with osseous stalactites. We then closed the wound with absorbent cotton and applied a bandage. Iodide of potassium in three-grain doses was ordered in its feeding-bottle three times a day, and a mixture of cod-liver oil and pancreatic emulsion to be given in teaspoonful-doses between meals. Tincture of opium to relieve pain in such doses and as frequently as required.

The next day our patient seemed no worse for the operation and no elevation of temperature followed the procedure, but the suffering still continued. The wound was kept open by introducing a probe every other day and redressed under the spray. As this operative interference seemed fruitless in results after the lapse of a week, we permitted the wound to close, the exceedingly bad aspect of the case not warranting the more formidable operation of linear osteotomy or trephining.

Continued application of hot flaxseed poultices were now ordered, and tincture of opium given as often as required. The cataplasms afforded some relief, but at night the pain was so great as to interfere almost entirely with sleep. Although the suffering seemed constant, there appeared to be paroxysms of intense aggravation.

The case now proceeded from bad to worse; the swelling increasing, obliterating all the furrows on the cutaneous surface of the thigh, even the gluteofemoral fold, and the thickening began to invade the condyles, so that the limb presented almost a cylindrical tumefaction from one end to the other, and when viewed in contrast with the opposite—which seemed shrivelled into a little pipe-stem from the general atrophy—it was about three-fold in circumference, so sensitive to touch that it lay in the supine position upon the lap of its devoted mother almost continually for six weeks, being unable to sit and shrieking with pain upon the least movement. A severe bronchitis now added to its anguish, and the gums over the upper central incisors became very much swollen, ulcerous, and sloughy, bleeding upon touch and concealing the teeth. This increased the distress by interfering with sucking. The appetite became so poor that it took but two bottles in the twenty-four hours. The quantity of anodyne was gradually increased from two drops of the tincture of opium to twelve and even fifteen, and finally so excruciating became the pain, that I began to resort to morphia for relief, giving as much as one-fifth and sometimes three-tenths of a grain before a disturbed slumber afforded partial respite. The picture was truly appalling. So wasted and wan was the little sufferer that almost every bone became visible. The bronchitis continued, the cough being accompanied by pitiful shrieks. Grasping the infant beneath the armpit so increased its suffering that it was permitted to remain in the recumbent position. Ablution and change of apparel performed with greatest caution and tolerated only under protest. Dentition was also aggravating the general condition so that incisions into the gums over the approaching teeth was presumed to partially alleviate the distress.

The long-looked-for pointing and fluctuation failing to put in an appearance, fears of a malignant growth were now entertained, despite the extreme youthfulness of the patient. Occasionally a slight œdema about the face suggested an impending complication to terminate the case in dissolution. At times we thought that a diminution in the swelling at some points was discernible, but it was more apparent than real. The cod-liver oil being illy tolerated, eggs and wine were substituted.

About the beginning of December I was suddenly called east. Two days previous to my departure, looking upon the case as hopeless, I ordered three-fourth grain doses of mercury and chalk three times a day, and all other medication to be suspended excepting the anodyne to relieve pain, and the limbs to be wrapped in cotton batting. Upon my return, ten days subsequently, I was surprised to find my little patient still alive, and the picture of suffering metamorphosed into one of apparent comfort and gaiety. The limb was decidedly reduced in thickness, more at some points than others, so that shallow folds began to present themselves. The appetite had remarkably improved, four to five bottles of food being eagerly accepted in twenty-four hours. Sleep was undisturbed and of considerable duration and so reduced the sensitiveness that it sat upon its mother's lap.

Gradually the enlargement presented a process of liquefaction and the scrawny form began to cover itself with adipose. One week after my return, the mother, to secure a week of much needed recreation, departed for the East. The nurse who assumed charge of the infant, through some misapprehension and at the solicitation of friends, discontinued the use of the mercury. In a few days the old state of affairs threatened to return, all the past symptoms again manifesting themselves. At this juncture I had the mother telegraphed for, and on her return the mercury was continued, when it again reverted to a convalescence like a charm. The scorbutic gums gradually receded, first under the application

of iodoform, then of alum, and in about four weeks the case was discharged as cured, but slight osseous hypertrophy remaining to mark the pathological process.

The child plays with one limb as much as with the other, moving it about in every direction with as much celerity. It has grown fat and large, and teeth are rapidly filling its mouth. Its nourishment now consists mostly of solid food.

In January, 1882, however, previous to its complete recovery, the tibia of the same side assumed a slight enlargement in its entire length, disappearing, however, in a few days under the continued administration of hydrarg. cum cretæ.

On reviewing the history of this case a number of interesting points are offered for consideration. The absence of specificity, which was pretty thoroughly searched for; the want of preceding dyscrasia, none of the exanthemata, struma, or injury entering into its etiology, presents a striking example of the well-remarked expression that age does not preclude the possibility of any malady, referring here, of course, to the extremely early period of life for this disease without apparent cause. Its evident subacute or chronic course, as elicited by the early history, dating back almost to birth in its insidiousness, and the sudden engrafting of an acute process by the remarkable rapidity with which the swelling appeared is also worthy of notice.

That so aggravated an example of formidable disease—when one considers the compactness of this type of connective tissue—should terminate in resolution is also a marvel, experienced observers recording it an exception to the rule, necrosis and caries, often destroying the life of patient, being the usual result. In addition should be remembered the disadvantages against which Nature labored, the infant being artificially reared from the beginning.

The extreme tolerance of opium at so early a period of life suggests the propriety of an assertion that the extent of pain and suffering should be the measure of its indication rather than the age of the subject. That no deleterious after-effects are now to be seen also warrants this conclusion. Impaired nutrition was rather to be attributed to the disease than the anodyne.

The absorbent or alterative effects of mercury were here beautifully illustrated. Nor can the result be entirely attributed to the vis medicatrix naturæ when you will recollect that upon suspension of the mercurial all the symptoms began to return, followed by relief upon its readministration.

The time during which this bony structure must have been subjected to the pressure of effused inflammatory products without destruction of tissue, impairment of function, or diminished usefulness is certainly marvellous—from October 8th to December 5th, fifty-eight days having elapsed before the subsidence of the acute stage.

The American Academy of Medicine, according to a recently published list, has nearly two hundred members. It is a curious fact that all the members except nine live in the East. Ohio, Illinois, and Michigan are the only Western States that possess membership, the latter State being represented by Dr. Connor alone. The natural inference is that college-bred physicians will not go West.

Trichinosis.—More cases of trichinosis have been discovered in Brooklyn, and in Hoboken, N. J.

Progress of Medical Science.

Influence of Pyretic Diseases on the Course of Syphilis.—It is well known that the grave pyretic diseases can materially modify the course of constitutional syphilis, so that its manifestations may temporarily subside or be moderated. In corroboration of these views, Dr. Petrowsky (*Vratsch*, No. 22) relates the histories of three patients who appear to have been entirely cured of it in consequence of an intercurrent fever. The following case illustrates his claim. The patient, male, aged thirty, contracted syphilis six months previous to his entering the hospital. He had an indurated ulcer on the prepuce, balanitis, a number of flat condylomata on the head of the penis, discharging papules thickly covering the scrotum, and large mucous patches on the fauces, while the scalp was covered with the desquamating papular syphilides, and on the face were numerous tubercles. A mercurial treatment of six weeks' duration had but a very slight effect, though the Hunterian induration grew smaller and the syphilides on the scrotum became drier and smaller in size; the remaining manifestations were unaltered. Toward the close of the second month of his stay in the hospital, he contracted small-pox. The disease was very severe, but he recovered entirely, and when the scabs fell off not the slightest trace of his former syphilitic manifestations could be discovered. This patient was under observation for a number of years, remaining free from the syphilitic symptoms. The second case, also in the early stage of syphilitic intoxication, recovered in consequence of a grave attack of facial erysipelas lasting two weeks. Here mercury was not used at all. The subsequent history was the same as in the preceding case. The history of the last patient is less striking. After recovery from typhoid fever a gummy tumor situated at the angle of the jaw suppurated and healed of itself, leaving a cicatrix that was free from all appearances of disease.

An Instance of Simultaneous Infection with Recurrent Fever, Measles, and Typhus Fever.—In Russia, where all infectious diseases rage uncontrolled and in their most malignant forms, it is claimed that there are frequent instances where the system can be the seat of combined infection. While this fact has been notoriously a matter of observation in certain diseases of a particular group (typhoid, typhus, and recurrent fevers) the same sort of combination has been described in some others of the eruptive, miasmatic, and contagious fevers. Such a complex infection is called in Russia mixed typhus. As a rule, it is possible to recognize the characteristic features of the elementary disease, but in some cases the picture is too confused to permit any intelligent interpretation of the symptoms. In connection with this subject the case reported by Dr. Pasternatzky (*Vratsch*, No. 36) is very interesting, as it shows the possibility of a triple infection (recurrent fever, measles, and typhus fever). The patient, a boy, fourteen years old, was under treatment in one of the temporary hospitals for infectious diseases, under the management of Professor Tschudnowsky (St. Petersburg). The day of admission was the fourth day of the first paroxysm of recurrent fever. It lasted in all seven days, and was followed, after four days of apyrexia, by the second attack, lasting four days. During the last day of

his first paroxysm, and three days after his admission, the first case of measles entered the hospital, from which the patient very probably contracted this disease. It manifested itself after two days of apyrexia, following the second attack of recurrent fever, and ran a very typical course. On the seventh day the eruption disappeared. On the eighth the temperature returned to normal and desquamation commenced. The apyrexia lasted thirty-six hours, when the third attack of recurrent fever made its appearance, lasting three days. The poison of typhus fever entered the system of our patient most likely during the attack of measles, and the disease broke out immediately after the third paroxysm of recurrent fever, reaching its intensity on the sixth day with the appearance of eruption, bronchitis, catarrh, lachrymation, etc. Typhus fever followed its usual course until the eleventh day, when the fever suddenly went down, the patient was attacked with diarrhœa and vomiting, the spleen and liver became enlarged and painful, for four days there was present mild pyrexia, when finally the convalescence was fully established. This unusual termination of typhus fever is interpreted by the reporter as being due to the appearance of the fourth paroxysm of recurrent fever, which closed this strange and complicated illness.

Hour-Glass Contraction of the Uterus Treated with Amyl Nitrite.—Dr. Fancourt Barnes relates a case in which the nitrite of amyl was successfully used by him to counteract the uterine spasm produced by ergot. Being called to a patient who had been attended by a midwife, he found that ergot had been given after the birth of the child, to expel the placenta. Expulsion had not been accomplished, however, and the umbilical cord had been torn off. The os internum and Bandl's ring were firmly contracted and the uterus admitted the finger only. Bearing in mind the power possessed by amyl nitrite to relax muscular tension, three drops were given upon a handkerchief. During the inhalation the uterus was found to steadily yield, so that the hand was introduced and the placenta detached. It was found to possess a remarkably exsanguinated appearance. Dr. B. was not aware that this reagent had been used before for this purpose, although it had been recommended theoretically in his father's "Obstetric Operations."—*Brit. Med. Journal*, March 18, 1882.

Experiences of Thiersch in Nerve-Stretching for Disease of the Spinal Cord.—In the *Boston Medical and Surgical Journal* for March 2, 1882, Dr. G. L. Walton reports four cases of nerve stretching from the clinic of Professor Thiersch (Leipsic). In one, a temporary improvement was noted, but in the others none at all could be recognized, these results coinciding therefore with many others that are being published from the experience of surgeons in various quarters. The following instance is given as showing the best result he obtained: A varnisher, thirty-five years of age, the subject of spastic spinal paralysis of six years' standing, following typhoid fever, gave the following symptoms: Numbness and weakness of the lower extremities, with a band-like constriction about the body, lateral distortion of the spine, convexity to the right between the first and twelfth dorsal vertebræ, to the left below the twelfth, but with no apparent inflammation of the cord or membranes. Upper extremities normal, but in lower, movements impaired, though neither ataxic phenomena nor abnormal sensibility were apparent. The operation consisted in putting the patient in the prone position under chloroform, when after exposure of the sciatics they were stretched to such an extent that the buttocks were lifted from the table during the effort. Lister's antiseptic method was rigidly followed and the wound closed by sutures, after the introduction of drainage-tubes.

For a few days there was increase of mobility, but soon prickling and burning of the feet were felt, and then the old symptoms gradually returned, and on the fourteenth day it was generally conceded by those in attendance that no permanent advantage had been gained. Of the three remaining cases, where no improvement ensued after stretching, one was of locomotor ataxia, thought to be of syphilitic origin.

Paroxysmal Occurrence of Hæmoglobinuria.—Dr. Robert Saundby, of Birmingham, has just published the results of his personal observations upon an affection which was formerly known under the name of intermittent, paroxysmal, or winter hæmaturia. It was first described by Dressler, in 1854. Subsequently the same disease was called hæmatinuria, but in 1872, when Lebert called attention to the fact that Gschleiden had proved the spectroscopic appearances to be those of hæmaglobin or met-hæmaglobin, and not hæmatin, the new term, hæmoglobinuria, came into use. The disease may occur at any age, but the young are most frequently attacked, and the male sex by preference. Though in some cases hereditary, it is almost invariably precipitated by a rigor of some kind; in rarer cases it has been induced by a blow or exposure to cold. The relation it bears to ague is not clear, nor is it specially related to any diathetic tendency or specific disease. Functional disturbance of the liver is often an associated condition, and exceptionally the spleen is found to be enlarged. During an attack the temperature-range may be variable, from the subnormal to even a high degree of fever. The microscopic characters of the blood are those of slight anæmia. The urine contains hæmaglobin or methæmaglobin, serum albumen, paraglobulin, granular and hyaline casts, and urates.

The prognosis is good, but while spontaneous cures are reported, there is a tendency to relapse—not modified by the use of any drug. Quinine appears to be useful during the paroxysm, but residence in a tropical climate is recommended as affording the best prospect of permanent restoration to health.

The Dental Engine Modified for Surgical Use.—Dr. Garretson, of Philadelphia, in an illustrated article (*Annals of Anatomy and Surgery*, March, 1882), describes a new mechanical adjuvant for surgical operations, which seems calculated to give great assistance in a certain class of operations, where the parts are difficult of access or a special nicety is required that is hardly to be obtained with the ordinary instruments of the surgeon's armamentarium. This appliance is in reality nothing but a modified dental engine, and those who have seen the latter in use can readily understand the mechanism of the former. For the wire cable of the dental engine is substituted a steel arm. An assistant turns the crank of the surgical engine, while in the dental the foot upon a treadle gives the propelling power. The engine, of which the best is Bonwill's, of Philadelphia, is supplied with instruments of various forms, such as circular saws, rose drills, bits, etc. The rapidity with which it accomplishes the object

may be appreciated from the fact that an instrument can be made to make fifteen thousand revolutions in the minute. Dr. G. finds the engine is specially suited for removing necrosed bone, exostoses, carious portions of shafts, segments of the coccyx, in exposing the zygomatic and sphenomaxillary fossæ, and for trephining.

Tendon Reflexes.—Dr. Byers, of Belfast, has published some cases illustrating the importance of the patellar tendon reflex symptoms in the diagnosis of certain nervous lesions. Though not strictly a pathological condition, he has only once found it absent in a healthy person: and yet he observes that under certain normal conditions it may not be produced, as for example, when the individual happens to be very fleshy, or when the tendon is unusually short. Berger is also quoted to show that the reflex may occasionally be absent without nervous disease (in about one per cent.). To determine whether the reaction be present, he places the patient on a chair, lets the foot be planted firmly upon the floor at a little more than a right angle. He then rests his left hand on the quadriceps muscle and with the other hand strikes the tendon below the patella. The muscle is then felt to contract if the reaction ensue. Should this fail, however, the patella may be struck, or even the tendon above the patella. This is Buzzard's method. Cases of tabes dorsalis and of diphtheritic paralysis are given where the absence of the reflex was noteworthy, while in a case of acute anterior polio-myelitis the absence of the patellar reflex enabled him to differentiate the disease from a cerebral disease, there being in this case either exaggerated reflex or none at all. In his fourth history, one of right hemiplegia, there was increased patellar reflex of the right leg and exaggerated supinator reflex of the right arm.—*Dublin Journal of the Medical Sciences*, March, 1882.

The Rapidity of Amyloid Degeneration.—Edward Bull, in several of his works on Bright's disease, has endeavored to demonstrate that the development and course of amyloid degeneration are, as a rule, vastly more rapid than has been hitherto admitted. In the present article he cites a case of amyloid kidney in which favorable circumstances have, as he considers, permitted him to determine the space of time that separated the causal moment from the first trace of the albuminuria. This period of time did not exceed thirty hours. The subject, a sickly man, twenty-two years of age, was attacked by a severe phlegmonous affection of the right lumbar region. An incision made on November 12th, at noon, revealed the presence of a considerable abscess, which was treated by the antiseptic method. For a long time previous to and also on the day of the incision, the urine had been examined for traces of albumen, but always with a negative result. On November 13th, in the evening, traces of albumen were discovered for the first time. After a continuous increase of albuminuria, collapse and death occurred on November 30th. At autopsy the left kidney was found to be pale, swollen, and amyloid; the right kidney was implicated in the surrounding phlegmonous process, and was atrophied, sclerotic, but not amyloid: the liver and the spleen were not amyloid. The accession of air to a suppurative centre being considered by him to be necessary to induce waxy change, a degeneration of the left kidney could not probably have existed prior to the incision, a circumstance still better corroborated, according to the author, by the previous absence of albumen from the urine as well as by the insignificant extension of the amylaceous deposit. Hence, the author considers that the case in question is strongly in favor of his opinions as to the rapid development of amyloid degeneration. It also agrees with his experience that the kidneys are in general the first organs attacked by this degeneration, or, at least, that they are in all cases affected at a very early period.—*Nordiskt Medicinskt Arkir*, Bd. XII., No. 5.

Resuscitation of Animals after Exposure to Extreme Cold.—F. F. Loptschinski says (*Vratsch*, No. 5–7) there is a remarkable disagreement between experimenters and clinical observers as to the manner of treating individuals that have been exposed to extreme cold. While nearly all of the latter hold that the application of heat should be gradual, the former (Beck, Horwat, Jacoby) advise that it should be rapid. The author has experimented with dogs in order to solve this question. Some of the animals were exposed to cold air (−17° C., two above zero F.), others were packed in freezing mixtures (−13–15° C., 5–8° F.). After freezing, one of the animals (twenty experiments were made, each with three dogs) was immediately placed in a warm bath of 37° R. (115° F.); the second was placed in a room the temperature of which was 22–24° R. (81–86° F.); the third was first placed in a temperature of 0° (32° F.), and then, as the temperature of the rectum arose and manifestations of life were shown, the bodily temperature increased. Friction with brushes and dry cloths was used in all three cases.

The experiments, which were made with great care, throw light on various conditions which will not be referred to here (blood examinations, microscopic examinations of the muscular tissue, conditions of temperature, etc.). But there were other results which have a practical significance for physicians. Of 20 animals that were exposed to a low temperature which was gradually elevated, 14 died; of 20 animals that were immediately brought into a warm apartment, 8 died; of 20 animals that were immediately placed in a warm bath, *none* died.

Prolapse of the Urethra in a Young Girl.—Dr. V. Ingerslev reports the case of a girl, ten years of age, who attempted to stop laughing by stuffing a handkerchief into her mouth. She immediately had a sensation as if something had broken between her thighs, and soon afterward felt something which was not there before. The labia were separated by a reddish blue tumor, the thickness of the end of the index finger, about a centimetre in length, with an opening at its free end. There was a frequent desire to urinate. The mucous membrane was easily reduced under chloroform, but gradually reprotruded. Reposition was effected, tannin was applied and the vagina was tamponed. Prolapse again occurred. A soft catheter was then introduced, passed through a cork which was secured close to the urethral orifice. The prolapse still recurred. The protruded portion was then cut off and four sutures were passed, so as to sew the urethral orifice to the mucous membrane of the vulva, and a soft catheter introduced. The sutures were removed in eight days, at which time there was no prolapse. Ten days later, another prolapse, 1 ctm. in length, occurred. This was cut off without suturing, and no catheter was introduced. Eight days later the wound had healed and the prolapse has not recurred.—*Hospitals-tidende and Nordiskt Medicinskt Arkir*, Bd. XIII., No. 29.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, May 6, 1882.

POST-GRADUATE STUDIES.

THE remarks recently made regarding the utility of establishing post-graduate courses have given rise to considerable discussion in many quarters. There is a strong sentiment in the profession in favor of any movement which would utilize in a proper and systematic manner for the working practitioner the clinical resources of medical centres. No man enters the practice of his profession without being painfully aware of the fact that there are many things which were left undone in his college curriculum which should have been done. With the best of intentions on the part of the most industrious student, there is an impossibility of doing more than laying the ground-work for future study. The time is comparatively short for this purpose in any event, even allowing that his powers of mental assimilation are more than ordinarily active. He is at best a crammed individual, who can pass a faculty or hospital examination, but who has little or no clinical experience. It is true he has occasionally attended cliniques at the larger hospitals, and has witnessed most of the major operations, but of actual clinical instruction in the commoner matters pertaining to practical medicine he has next to nothing. Of his every-day duties, which are expected of him in his commencing practice, he knows very little indeed. This is due in part to the mistaken idea that cases are not interesting or valuable for him unless they demand some surgical operation, or are perhaps unique as to the lesion presented. Consequently almost every student will go to the hospital to see the most ordinary case of amputation, when he would have no possible interest in visiting a fever ward or in clinically studying a case of infantile diarrhœa. When he gets into practice, however, he finds where he has missed his opportunities, and yearns to enjoy them again in some shape or other.

And this is precisely the condition in which are many of the working practitioners over the country, who, during their medical pupilage, have had the ordinary clinical privileges connected with the larger metropolitan colleges. With the best of intentions they have made the worst possible selection of their cases for clinical study. In this respect they have been in no small degree aided and abetted by their clinical professors, who would, of course, much sooner operate for stone than dress a fracture, or would be more intent upon describing a rare pathological lesion than prescribing for a case of ordinary colic.

And yet the every-day man in the country often wishes that the tables had been turned in his favor when he is called to apply his first bandage or to treat his first case of measles.

We have repeatedly said that if there is one thing in the supplementary education of the younger practitioners, which is needed by them more than anything else, it is the opportunity of the clinical experience and clinical study which shall minister to the pressing necessities of ordinary country practice. That he does not obtain it, as a rule, in the college clinic or in the hospital ward, is quite generally admitted. This can be said without any disposition to reflect upon the good intentions of the clinical professors, or the usual discrimination of the ordinary student. The student knows nothing practically concerning what is required of him in his future practice, and naturally loses what good opportunities for useful clinical experience he might otherwise obtain. There is nothing that gives him a keener relish for this sort of knowledge than a five or ten years' practice in some remote district where he must from necessity depend absolutely upon his own resources and rely almost entirely upon his own judgment. Such men are so much in favor ofpost-graduate studies, in which clinical teaching in our hospitals shall be a leading feature, that they are inquiring how a system can be inaugurated which shall make such a thing possible.

The material for the purpose is at hand in all our larger cities, supplied as they are by well-equipped hospitals, and it is possible that the necessary details of management may be made under some central organization, which shall realize in a practical manner the main necessities of post-graduate courses. The first step in this direction would be a general agreement among the hospitals as to the regular days and hours during which, beside instruction, would be given to the members of the profession desiring it. The next move would be in the direction of establishing special courses of instruction in the wards to limited classes; and finally, the arrangement of courses in the different hospitals so as not to conflict with one another, and allow the practitioner to map out a plan of attendance to suit himself.

THE NEW YORK CODE AND THE NEW YORK MEDICAL JOURNAL.

Dr. Frank P. Foster, editor of *The New York Medical Journal and Obstetrical Review*, writes: "In your issue of the 22d inst., speaking of the consultation section of the new State Code of Ethics, in an article headed 'Freedom in Consultations,' you say: 'Already we are enjoying the proud distinction of being the only journal that has assumed the responsibility of being outspoken on this question.' By referring to the March number of this journal you will see that the Record is not the only journal that has been 'outspoken on this question.'"

At the time the article to which reference was made was written, we had not read the editorial in the columns of our esteemed contemporary. We are glad now to call attention to the subject, and take this opportunity of congratulating Dr. Foster on the forcible manner in which he has supported the principles of the New York Code.

AN ANTHROPOMETRICAL LABORATORY.

Mr. Francis Galton has offered to the public a novel suggestion, but one which is the logical result of the scientific tendency of the times. He urges the establishment in our large cities of anthropometrical laboratories. By these he means places where as accurate as possible an appraisement of a person's physical condition and powers can be made. Mr. Galton suggested, some time ago, that parents should keep a life history of the physical and mental progress of their children, which should be supplemented by photographs taken at stated intervals. By means of well-equipped laboratories such histories could be made much more complete.

The special objects of investigation in these laboratories would be numerous. The height, weight, dimensions of different parts, any facial or other anatomical characteristics, the color of the hair, condition of the skin, lungs, heart, kidneys, etc., would all be estimated with every possible exactness. Still further, there would be tests applied to determine the delicacy of the touch, the acuteness and range of sight and hearing, and of the other senses. Even the simpler mental faculties would be gauged; for example, the memory and judgment. The rapidity in forming judgments, as is now known, can be easily and quite accurately determined. Two different signals are described, and the person to be tested is told to make a different response for each. One of the signals is then suddenly displayed. The interval between this display and the response made by the individual experimented upon, indicates the time required in forming his judgment. This is found to vary in different individuals.

To supplement the work of these laboratories, it is recommended that a medical history be kept. Physicians should make careful notes of the history of their private patients, and these notes should be given to the patient for preservation and future reference.

Thus, when a person reaches old age he will have the complete history, not of his life, but rather of his body, a sort of physiological and pathological annal. The benefits to be derived from such documents would be, first, that of having an authentic history, which would be of personal and family interest; second, that of furnishing data upon which calculations as to probable dangers to his descendants could be made; third, an accumulation of such documents would give a solid basis for the study of many questions in anthropology at present unsettled.

The project of Mr. Galton will not be a popular one to the masses, and will no doubt receive some ridicule. There are many physicians, however, who can appreciate the benefit to science, and eventually to humanity, contained in such a scheme.

NEW REMEDIES FROM MADAGASCAR.

At a meeting of the London Pharmaceutical Society in February last, Dr. Parker, physician to the Queen of Madagascar, exhibited a very large collection of the materia medica of that island. He made some statements which should excite to activity some of the enterprising firms of this country who have now quite thoroughly ransacked the flora of America for new remedies.

Madagascar, we are told, is exceedingly rich in plants of all kinds. More than one-half of the natural orders of plants known to botanists are found there. Furthermore about sixty-five per cent. of the native species are peculiar to the island. In other words, it contains at least 3,000 plants not found anywhere else in the world. Here is truly a rich field for the physiologist and pharmacist.

Dr. Parker's accounts of the specimens which he exhibited are somewhat meagre; at least, as we find them reported in the *British Medical Journal*. He knew nothing regarding the medicinal value of many of the plants. Of others, his information was not very positive.

The Malagasy have classified their drugs according to their most prominent clinical effects. They have several remedies for bronchial diseases. The most curious is a fungus called Hôla-tâfa, which is given in the form of an infusion or decoction.

Drugs for urinary diseases are quite numerous and well patronized, since, says Dr. Parker, about one man out of every three has a stricture caused by venereal disease and hard drinking.

The drugs for intestinal worms are quite popular also. Among these is one which acts quite as well as santonin. Two drugs are mentioned as being efficacious for tape-worm. There is a native castor-oil which is of inferior quality. The natives also use one of the Rubiaceæ as an astringent and hæmostatic. They have a remedy for headache which is called Fisâva or "the disperser," one which would

certainly be popular in this country if it were as good as is claimed. The remedies used for rheumatism are not much recommended. A drug of more interest is the seeds of Vàto-làlaka. An infusion of these seeds is used to expel the placenta, and as we need an efficacious oxytoxic, it might be worth while to investigate this one. There are very good aloes in Madagascar, also aconite, and possibly nux-vomica. The Fangena or ordeal beans are described as very poisonous, but their exact physiological effect is not known.

From the brief notes given by Dr. Parker, it seems probable that Madagascar may furnish something of importance to our materia medica. We have plenty of new drugs now, but new remedies are pitifully scarce.

THE BREEDING AND DISEASES OF ELEPHANTS.

THE birth of a baby-elephant and the importation of Jumbo have greatly excited the popular interest. Taking advantage of this, the *Journal of Comparative Medicine* publishes in its current issue an article upon the breeding of elephants, as well as an editoral note upon the diseases of this animal.

The subject of elephant-breeding is treated by Mr. Arstingstall, Barnum's trainer, who was present at the birth of the only two elephants ever born in this country. The elephant, he says, rarely breeds in captivity, largely because he is kept on a low diet. If properly fed, the male and female can hardly be prevented from copulating. The evidences of heat are a slight swelling and congestion of the vulva. The period of pregnancy is between twenty and twenty-one months. Within three months the mammary glands begin to swell, and by the end of pregnancy they are as large as those of a cow. An elephant may conceive when it it is only fifteen years old. In that case it will often grow very rapidly during its pregnancy.

The elephant, Queen, which gave birth to a "baby" at Bridgeport this spring, exhibited no signs of disturbance up to a few hours before the act of parturition. There was then some uneasiness shown, and the animal was isolated and chained. The infant was delivered rapidly and without any apparent suffering on the part of the mother, who stood with the posterior extremities somewhat separated. The fœtus came out head and feet foremost, enclosed in its membranes. As soon as it was dropped the mother crossed the hind legs, and by rubbing them together severed the cord. Her subsequent proceeding showed a remarkable instinctive sagacity. The little one lay quietly in its sac—not breathing, and apparently lifeless. The mother as soon as the cord was broken turned around, and with one of her fore-feet struck the membranous sac quite forcibly. It broke with a loud report (so says the trainer). After rupturing the membranes she placed her foot on the thorax and pressed it with the appearance of much force, raised it and pressed it again until the baby began to breath and show signs of life. The elephant mother appeared to understand the principles of Sylvester's method as well as if she had taken a course at the First-Aid-to-the-Injured Society. The placenta was delivered in about two hours, the animal suffering considerably meanwhile. Five hours after birth the baby was able to stand on its feet. It walked to the mother, turned its trunk up over its head and began to nurse.

Some facts given editorially regarding the diseases of elephants are of interest. There are eighty-eight elephants in this country, valued at about $500,000. The diseases to which they are subject are a matter of some practical importance. A list is given and it is quite a long one. The more prominent affections are meningitis and apoplexy, vomiting, colic, and enteritis, hæmaturia, tetanus, pneumonia, foot and mouth disease, and anthrax. A work on the diseases of the elephant is now being written.

FABRICATED WINES.

WE are accustomed to think with complacency of the results of scientific research, and to feel sure that an extension of knowledge must, of course, eventually benefit the race. Occasionally such optimism receives a shock, and it is chemistry which furnishes our latest disappointment. To be sure we have never had very high an opinion of this occult science, being still in the penumbra of that darkness which it shed over our college career. But it was hardly expected that chemists would attempt to supplant the grape. We have, though this is what they have done for a long time, asked of them a cheap artificial quinine, and they gave us a synthetical claret which cheats the palate even of experts.

Since the phylloxera made such ravages in France and Switzerland, much attention has been paid, first to the adulteration, and then to the fabrication of light wines. This latter process has finally become so perfect and so widely extended as to threaten the destruction of many of the vineyards. The vinegrowers of the canton of Geneva, for example, have petitioned the government to do something for their protection.

This is a difficult thing to attempt. The new wine is not adulterated, but is fabricated. It contains everything that a grape-wine does and nothing more. It is made out of water, with alcohol, tannin, and sugar. The latter ingredients are obtained from raisins. A *boquet* is also given to it. It costs the retailer only thirty cents a gallon. Light wines (clarets, etc.) made in this way are sent to England, and presumably to this country. And so perfect are they that detection of the fraud is impossible to the chemist and not easy to the wine-taster.

There may be no harm in these artificial mixtures, but the medical man prefers and ought to know where and by whom the alcohol, tannin, and water that he prescribes is manufactured.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, April 18, 1882.

DR. ANDREW H. SMITH, CHAIRMAN.

DR. A. D. ROCKWELL reported

CASES ILLUSTRATING SOME PRACTICAL POINTS IN THE USE OF THE ACTUAL CAUTERY, AND IN ELECTRO-THERAPEUTICS.

CASE I.—A woman, sixty-four years of age, in November, 1881, swallowed by mistake a quantity of caustic liniment. About a week afterward she had some impediment in swallowing food, which gradually increased until finally only small quantities of liquids could be taken. Dr. Rockwell then saw the patient, in consultation with Dr. N. Perry, of Ridgeville, Conn., and found her emaciated and weak and complaining of an oppressive feeling in the region of the œsophagus, a few inches above the cardiac extremity. Occasionally whatever was swallowed was ejected before reaching the stomach. The case was diagnosticated as one of probable

STRICTURE OF THE ŒSOPHAGUS,

due to the effect produced by the caustic. On the following day the patient, with her family physician, saw Dr. Willard Parker, who explored the œsophagus, and decided that no organic stricture existed. Pain along the dorsal portion of the spine was excessive. Acting on the suggestion that the stricture was probably spasmodic, Dr. Rockwell slightly cauterized the spine over the seat of the severe pain, and on the following morning the patient swallowed solids without difficulty. Although the stomach was somewhat irritable for a time, complete recovery finally took place. The case was interesting because of the fact that the first application of the actual cautery removed permanently what seemed to be a tonic spasm which, on account of its persistency, was giving rise to very grave apprehensions.

CASE II.—This illustrated the good effect of the actual cautery in the treatment of some of the

SEQUELÆ OF CEREBRO-SPINAL MENINGITIS.

The patient was seen in consultation with Dr. Edgerton, of Middletown, and was a woman who, some years before, had been under his care for severe and persistent symptoms following this disease. From those symptoms she recovered, but, as the result of a fall, they returned in full vigor, and when Dr. Rockwell saw the patient she was suffering from a generally diffused hyperæsthesia, constant and severe pain in the basilar region, some nausea, and partial motor paralysis. She was thoroughly cauterized, two days in succession, along the whole length of the spine, and two days after the last application the patient was able to get out of bed, dress herself, and come to New York for a repetition of the treatment, under which she rapidly recovered.

CASE III.—A patient, bed-ridden for many weeks—the prominent symptoms being spinal irritation, insomuia, and violent attacks of cephalalgia—was seen, in consultation with Dr. A. R. Carman, of New York. The cautery speedily relieved her; and, under further treatment, she recovered so that she was able to resume her occupation of teaching.

These were a few of the many cases that might be cited in illustration of the benefit sometimes derived from the use of the actual cautery. The application of the remedy is easy, causes but little actual discomfort to the patient, although it is sometimes difficult to convince a timid person that it is not a terrible procedure.

LOCAL PARALYSIS—A COMMON MISTAKE IN THE SELECTION OF THE PROPER ELECTRIC CURRENT.

DR. ROCKWELL thought that the mistake could be best pointed out by reporting a few illustrative cases, from a score or more that might be narrated:

Mrs. ——, an opera singer, thirty years of age, was sent to him by Dr. J. B. Read. Several months before, while singing in public, she was suddenly attacked with left *facial* paralysis. The eye refused to close; she subsequently suffered from severe cephalalgia and marked vertigo. The physician to whom the patient first applied prescribed electricity, used it a few times, and then directed her to buy a small faradic apparatus, and apply the current along the course of the affected nerve. This was done faithfully for many weeks, but with negative results. On examination, no response, as might have been expected, could be obtained by the use of the faradic current. Galvanism, however, at once produced faint contractions, and three weeks after the proper treatment was begun, farado-muscular contractility returned, and recovery to a good extent had taken place.

CASE II.—A boy, four years of age, suffered from cerebro-spinal meningitis, which was followed by *complete paralysis of the right leg.* The patient was sent to Dr. Rockwell by Dr. Chauveau. Before Dr. Chauveau saw him a physician had recommended the faradic current, and it had been used faithfully, but without benefit. On examination there was no response to faradism, and only slight reaction to galvanism. Under the systematic use of the galvanic current, however, improvement began, and farado-muscular contractility was finally restored. The improvement in the power of locomotion was coincident with that of the electro-muscular contractility. Dr. Rockwell thought there could be no doubt that in both these cases the failure to correctly differentiate in the selection of the method of treatment not only interfered with the rapidity of recovery, but in one instance, at least, might be the cause of some permanent disability.

ELECTRICAL CONDITION OF THE MUSCLES IN FACIAL PARALYSIS.

In facial paralysis the farado-muscular contractility is either normal or decreased, but the galvano-muscular contractility may in addition, in certain cases, be *increased*, while the reaction to the faradic current in the same cases is either wanting or very much diminished. In these cases the galvanic current must be used with increasing strength, at each sitting, in order to keep up the vigor of the muscular contractions when galvano-muscular contractility is reduced to normal, or sometimes before farado-muscular contractility becomes manifest, and a rapid recovery usually follows.

DR. E. C. SEGUIN said, with regard to the use of *the actual cautery*, that his experience was very much in accord with that given by Dr. Rockwell. Occasionally remarkable results were obtained from one or two applications. He had found it very service-

able in exceedingly painful cases, as well as those of the character described.

With regard to the simplicity and painlessness of the application, he entirely agreed with Dr. R. Sometimes considerable argument was necessary to induce a patient to submit to the first application, but he had not had any trouble whatever concerning the second operation: indeed most patients returned of their own accord and asked for the use of the cautery. The question of the *utility of the two electric currents* he regarded as a very important one. But he thought it possible that in one of Dr. Rockwell's cases at least, if it had been left to Nature, the patient might have recovered without electricity. It was probably a case of paralysis from lesion of the nerve, whether from superficial pressure or from reflex action upon the nucleus of the nerve was uncertain, but there were good reasons, from clinical history and from electrical reactions to assimilate it with cases of ordinary nerve injury. In such cases he thought there was a fatality in the degeneration and regeneration of the nerve, and he doubted very much whether measures commonly used had greatly to do with recovery. The process of regeneration is much slower than that of degeneration, but it takes place with a great deal of certainty, and in a majority of cases of facial paralysis the recovery was through the process of repair of the nerve, and the consequent repair of the muscular tissue. He agreed entirely with Dr. Rockwell that the faradic current was next to useless for several weeks or months, and he also doubted whether galvanic applications had much to do with recovery. The changes in the electrical and nutritive state of the muscular fibres produced by the application might do something toward keeping up the nutrition of the muscle, and preserve it in a condition fit for action when the nerve had improved. He did not, however, believe that electrical currents could hasten cell growths.

The inutility of the faradic current in facial paralysis was a point worth directing attention to, and undoubtedly ignorance with reference to it had many times brought discredit upon the profession.

Dr Janeway said he had long believed that the great value of the galvanic current in facial paralysis was twofold.

In the first place, it gave a means of making a prognosis with regard to the probable time required for recovery. If the faradic reaction was destroyed and the galvanic preserved, the great probabilities were that it would require more than two months for recovery to occur, probably from three to six months.

In the second place, it was valuable in keeping up the nutrition of the muscles. The faradic current he regarded as totally useless in these cases, to say the least. Dr. Janeway then referred to a case of *facial paralysis* of the peripheral type, due to exposure to cold and occurring in a child eight months old.

With reference to the actual cautery, he had to admit the same doubt that Dr. Seguin had expressed concerning the utility of the galvanic current. He was sometimes in great doubt as to whether the good results were due to the mental effect or to the actual influence of the cautery. It was very frequently difficult to separate effects produced by an agent itself from those produced by the imagination.

In connection with the sequelæ of cerebro-spinal meningitis he had used, with benefit, the actual cautery along the side of the spine, in addition to blistering in the upper cervical and occipital regions.

Dr. Rockwell said he was very nearly in accord with the views expressed by Dr. Janeway and Dr. Seguin concerning the use of the two electric currents in the peripheral form of facial paralysis. The aid afforded to nutrition by the use of the galvanic current was very important. His chief object in reporting the cases was to direct attention to the necessity of correctly differentiating between the two currents.

Dr. Putzel referred to a case in which the faradic current used in facial paralysis produced actual harm. The paralysis was due to exposure to cold, and the degenerative reaction was well marked. The result was twitchings, followed by contracture, which was persistent.

Dr. Seguin wished to put upon record his experience with reference to an

UNDESCRIBED SEQUEL OF FACIAL PARALYSIS DUE TO COLD,

namely, a condition of marked twitchings corresponding precisely with post-hemiplegic chorea. Within the last eight years he had seen four or five recovered cases of facial paralysis in which, during the period of actual recovery, there occurred clonic twitchings, short, lightning-like jerks of muscles formerly paralyzed; and this phenomenon occurred without mislaid treatment or contracture.

Dr. Putzel thought there was a difference between this condition and post-hemiplegic chorea, because in the latter there was a slow movement of one muscular fibre after another, while in these cases the muscle twitches as a whole and then subsides.

Dr. Seguin remarked that the point brought out by Dr. Putzel was an interesting one. He had shown to his class a graded series of cases in which there were post-paralytic movements, and had been able to show two or three varieties in a single lecture. He had classified the cases into (1) those in which athetoid movements occurred, (2) those in which the movements were more marked, and (3) the ataxic cases. The shading off from one condition to the other is sometimes exceedingly delicate.

Dr. Roberts, as illustrating how widespread the opinion was that the differentiating of the two currents was not a matter of much practical importance, said that not long since he heard a college professor explain to his class the feasibility of treating all cases with an ordinary faradic battery.

Dr. Birdsall referred to two cases of facial paralysis of peripheral origin, in which there were contracture after a number of months and muscular movements of the quick variety. He had used the galvanic current in facial paralysis with the result of giving the patient relief from the feeling of tension.

RECENT CASES ILLUSTRATIVE OF LOCALIZATION AND ITS DIFFICULTIES.

Dr. E. G. Janeway reported cases as follows:

Case I.—*Blow in the fronto-temporal region—Unconsciousness—Aphasia and agraphia—Recovery.*—Patrick Q——, forty-seven years of age, native of the United States, and a silversmith, was admitted to Bellevue Hospital February 10, 1882. He was perfectly healthy up to three days before admission, when he was struck with a billiard-cue on the left fronto-temporal region. He fell and remained motionless and unconscious about twenty minutes. When he came to himself he was unable to speak, and on attempting to swallow water it flowed out

between his lips. There was severe pain at the seat of the blow, and considerable swelling. There was no loss of power in the arms or legs. On admission, there was a swelling in the left temporal region, but the skin was neither broken nor discolored. No fracture was made out. He had severe pain in the head; there was diminished power of the muscles of the right side of the tongue and of the right side of the face below the eye. The muscles about the eyes and of the limbs were unaffected. The tongue was deviated, as in cerebral paralysis, toward the paralyzed side. He was unable to speak his own name or the name of any object shown him or repeat a word spoken to him. Aphasia as well as paralysis of the lips and tongue.

On attempting to write his name or the name of an object, he made some of the letters correctly, but transposed some or omitted or put in wrong letters, and could not write in a straight line (agraphia). He was able to tell when a word was written or spoken correctly. The treatment consisted in the application of cold to the swelling, a blister to the nape of the neck, keeping the bowels open, and the internal use of iron and iodide of potassium.

February 15th, five days after admission, the pain had nearly disappeared, but he had marked vertigo.

February 18th.—No pain. Dizzy. The aphasia is slowly improving. He can, with much hesitation and stammering and thickness of speech, finally utter almost any word he tries. Amnesic with ataxic aphasia.

February 20th.—More pain, particularly at night, and especially if he lies upon the left side. Speech and movements of the face improving. He has but little trouble in writing.

February 24th.—Pain better, but still disturbs him at night.

March 25th.—The pain and dizziness gradually disappeared. The facial paresis has gone entirely. The aphasia and agraphia are hardly noticeable, but he says that he forgets names and the spelling of some words. Discharged.

Dr. Janeway thought the lesion consisted probably in laceration of superficial vessels, a certain amount of laceration of brain tissue, and the hemorrhage must have spread into the neighborhood of the third frontal, the posterior and lower part of the ascending convolution of the frontal lobe.

Case II.—*Tubercular meningitis—Conjugate deviation of the eyes—Intermittent paralysis and anæsthesia—Pathological lesions equal upon both sides—Caries of the spine.*—John C——, thirty-five years of age, native of Switzerland, was admitted to Bellevue Hospital March 31, 1882. On admission he was in a stupid and irritable condition, and seemed to be somewhat delirious. The head and eyes most of the time were turned to the right. The left arm and leg were rigid and almost devoid of sensation. Three of the vertebræ in the middle of the dorsal region were prominent, and the middle one of these displaced laterally. Urine acid, urates in abundance, specific gravity 1039, no albumen, no sugar.

April 1st.—The rigidity has disappeared. Temperature A. M., 100¼° F; P. M., 101° F.

April 2d.—Last night he was so delirious that it was necessary to tie him in bed. The bowels moved, but there was no diarrhœa. Temperature A. M., 100° F.; P. M., 100° F.

April 3d.—It was necessary to tie the patient in bed again last night. This morning he is less obstinate and talks more intelligibly. The whole surface of the body is hyperæsthetic. Sensation and motion have returned to the left arm and leg. Temperature morning and evening, 100¼° F.

April 4th.—Last night he was very delirious and had a convulsion. This morning he lies in a state of *coma vigil*, groaning, staring, and picking at objects about him. Face and eyes congested. The pupils are dilated equally; eyes turned toward the right. Opisthotonos. Sensation is much impaired in the left arm and leg, and he does not move either of them, although he did last night. He passes his fæces in bed. Temperature, A.M., 99¼ F.; M., 102° F.; pulse, 140; respiration, 40; death. At no time was there choked disk.

Autopsy.—At a point corresponding to the lump on the back there was absence of the intervertebral cartilage between the third and fourth dorsal vertebræ, the bodies of which were carious. Within the chest this portion of the spinal column was covered by a tumor, which proved to be a sac filled with cheesy pus—a carious abscess.

The peritoneum was thickly studded with tubercles. The upper portion of both lungs contained numerous tubercles.

The meninges of the brain were markedly congested. About the fissure of Sylvius and the medulla—less at other parts of the pia mater—were found a thin layer of pus and a few tubercles. The brain tissue was soft, and the ventricles contained a very small quantity of fluid. The meninges of the cord contained many tubercles. The dura mater, on its inner surface, was quite vascular and covered with a thin layer of false membrane.

The special points of interest in this case were the conjugate deviation of the eyes, the intermittent paralysis and anæsthesia upon the left side, but no difference in the pathological conditions found at autopsy upon the two sides. If there was any difference at all, the lesion was most marked upon the side opposite to where it was expected to be found.

Case III.—*Cerebro-spinal meningitis—Onset sudden—Symptoms chiefly unilateral—Pathological lesions the same upon both sides.*—The patient was a girl, fourteen years of age, who was attacked suddenly with convulsions, unconsciousness, and a high fever. There was severe pain upon the left side of the neck, beneath the external auditory meatus, paralysis upon the opposite side of the body, with persistent loss of sensation, but the least touch or irritation beyond the median line upon the left side produced movements. Dr. Janeway supposed that the symptoms were associated with disease of the left hemisphere, but at the autopsy *there was no perceptible difference in the condition* of the hemispheres.

Dr. Janeway also referred to a case in which the symptoms pointed distinctly toward cerebro-spinal meningitis. Choked disk was exceedingly well marked. At the autopsy the only lesion found was hemorrhage into the left ventricle.

The special point of interest in the cases was that with meningial symptoms, although there might be persistent hemiplegia and hemianæsthesia, the lesion was not necessarily localized upon the opposite side of the brain or confined to one side, but might be equal upon both sides.

Dr. Seguin remarked that Dr. Janeway's first case was one for admiration and not for criticism.

With regard to meningitis, he thought cases of that disease were not of very great value in studying localization. In several of his cases there had been hemiplegic symptoms with undoubted lesion upon both sides, and the explanation was not in accordance with the appearances upon the surface, but

in accordance with the general changes beneath, as had already been suggested by Dr. Janeway.

Dr. Janeway remarked that he had noticed in several cases where hemianæsthesia had existed, no evidence of special lesion had been found in the occipital lobe; the lesion had been expended chiefly over the central portion of the brain.

Dr. Seguin had seen hemianæsthesia without lesion.

Dr. W. R. Birdsall then reported a case of

BRACHIAL MONOSPASM AND MONOPLEGIA WITH SARCOMA OF THE ASCENDING FRONTAL CONVOLUTION.

The patient was one whom he saw, in consultation with Dr. Macgregor. The original tumor was a sarcoma of the thigh. The principal interest in the case, in this connection, was with reference to the centres for localization of lesion. There were four small tumors in the brain, but the one believed to be that which gave rise to motor symptoms chiefly, if not entirely, was situated in the motor area for the *upper* extremity, the portion of the ascending frontal and the parietal convolutions, the so-called centres for the lower extremity being free. There was paralysis of the arm and face.

Dr. Seguin thought that the existence of the other tumors rendered the case puzzling.

Dr. W. H. Thomson thought it was difficult to locate pathological lesions according to results obtained by physiological experiments, because of so many elements entering to disturb symptomatology. Symptoms, due to pressure from any cause, traumatic, inflammatory, etc., are entirely absent when the physiologist experiments upon a healthy animal. It cannot be denied that physiology has demonstrated pretty closely the limits of the motor area in the brain, and he thought that very often pathological facts were obtained which bore out such localization. But even in a case where a tumor is exactly defined, and has removed a neatly circumscribed portion of cerebral tissue, we do not know to what extent it may have interfered with or come in contact with connections which are motor or sensory, or both, in other portions of the brain. Yet, in some chronic cases, he believed we have very valuable hints concerning localized irritations of the cortex. At least he had thought so in some cases of traumatic epilepsy which he had treated. With a certain degree of definiteness, he thought it was allowable to reason in chronic cases upon the facts of physiology. In acute cases there was embarrassment in reaching conclusions, particularly where there are symptoms of a meningial character.

Dr. Putzel thought that in Dr. Birdsall's case there were too many tumors for purposes of localization. He referred to a case where there were convulsions affecting the right side, followed by hemiplegia of the ordinary cerebral type. There was no disturbance of sensation. The child died of marasmus. At the autopsy, nine or ten tubercular tumors were found, one as large as a good-sized hickory nut taking up the middle part of the ascending frontal and parietal convolutions, but upon the same side as the paralysis. It was difficult to reason from the existence of tumor with regard to localization, especially where there were several and scattered through different parts of the brain.

Dr. Seguin thought that Dr. Birdsall's case should not be rejected entirely, but should be taken in association with other cases. He thought the tumor, specially mentioned, was within the motor centre for the arm. With reference to Dr. Putzel's case, he asked if the decussation in the pyramids was examined?

Dr. Putzel believed it was, and found normal.

Dr. Janeway had seen enough cases to lead him to believe that, very frequently at least, the lesion, when upon the same side with the hemiplegia, was surface hemorrhage. He referred to a case in which there was hemiplegia of the arm and leg, afterward convulsions in the arm and leg, followed by general convulsions. At the autopsy, a clot was found in the cavity of the arachnoid over the upper part of the central convolutions, in connection with this thrombus of the veins from the fissure of Rolando, with softening of the upper extremities of two central convolutions, but not extending deeply.

The Section then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 28, 1882.

Dr. J. C. Hutchison, Vice-President, in the Chair.

Dr. A. C. Post read a paper (see p. 281) on

THE LOCAL TREATMENT OF CIRCUMSCRIBED GANGRENOUS INFLAMMATIONS OF THE SKIN AND CELLULAR TISSUE, COMMONLY KNOWN AS CARBUNCLES AND FURUNCLES.

Dr. Post, as bearing upon the arterial hemorrhage which occurred in the last case reported in his paper, referred to a case which appeared at his clinic two weeks ago. It was one of large carbuncle upon the neck, and while he was examining it a considerable flow of bright arterial blood occurred through one of the openings made by ulceration. The carbuncle had been incised several days before, but not very thoroughly, and he made a free incision, and the bleeding ceased as soon as the tension was removed. The spontaneous occurrence of arterial hemorrhage in two cases, and the prompt cessation of the bleeding after making a free incision, which removed the tension, suggested that one of the objections urged against incisions because of their liability to troublesome hemorrhage, had no real foundation.

Dr. George A. Peters then read a paper (see p. 477) on

HYDRONEPHROSIS.

Dr. Weir, in his case of hydronephrosis, referred to the absence of urea in the fluid drawn early by aspiration. He had found that this had occasionally been observed, and the explanation given had been that pressure of the contained fluid upon the kidney caused the diminution of urea, and that view was supported by the fact that immediately subsequent to the operation the fluids discharged through the wound contained a nearly normal quantity of urea.

Another interesting feature was the result of the exploration of the ureter, which was made after the inflammatory process had subsided, with the hope of finding the cause of the obstruction to be a calculus, when its removal would have been attempted.

He was able to pass a flexible metallic probe down to the brim of the true pelvis, but was unable to find any foreign body, although a soft cervical bougie was grasped at some eight inches from the wound, as if in a stricture. Furthermore, it might be noted that immediately after the final closure of the wound, the patient noticed an increase in the quantity of urine discharged by the natural passages. He also

thought these two cases were instructive from another point of view. In a recent article on nephrectomy, by Korner, it is advised that, in cases of hydronephrosis, the kidney should be removed, because that, although the hydronephrosis might be relieved by an operation, a troublesome fistula remained, and therefore it was wiser to remove the kidney. Korner stated that he was unable to find any case on record of a cure after an incised hydronephrosis. This case, and probably the other also, disproved such a remark.

Dr. Peters said that his own case showed that it was not always so, and that we may hope for a cure.

Dr. Weir remarked, with regard to the fatal case reported by Dr. Peters, that one thing which led him to believe that he had to deal with a large floating or wandering kidney was the mobility of the tumor. Pressure caused it to disappear upward almost entirely. Several such enlargements of the liver are depicted in Frerich's work on diseases of the liver.

Though not recognizing any cystic condition in the case, the success obtained in nephrectomy for movable kidney—only two deaths in nine cases—warranted the removal of the organ, the expedient of Hahn of securing it in the loin by anchoring sutures being somewhat uncertain as well as too novel to be entertained.

Dr. Lange asked if intestine could be recognized in front of the tumor.

Dr. Peters said that there was sometimes what seemed to be a thin layer of resonant tissue.

Dr. Lange remarked that in the majority of cases of tumor of the kidney, manual examination had showed the presence of intestine in front of the tumor.

Dr. Peters said that it was so in his real case; and in the fatal case there was at times what was regarded as slight tympanitic sound over the anterior surface of the tumor.

Dr. Lange referred to two cases, which, although not belonging exactly under the title of Dr. Peters' communication, he thought worthy of being mentioned. They were cases of

PYONEPHROSIS.

The first came under his observation in 1878, and the history of it was presented to the New York Pathological Society.

In that case a fistula was made, the tumor diminished in size gradually, and two years afterward there was only a slight watery discharge. The fellow kidney was also enlarged and not in the normal position.

The second was the case of a man fifty-one years of age, who had had a fistula made in the side by Dr. Lellmann, at St. Francis Hospital. The tumor, which was about the size of a man's head, gradually diminished in size, and when the patient was discharged from the hospital, a number of months later, he was in comparatively good health. There was a discharge of urine continually, but the patient wore a rubber bag into which the drainage-tube emptied. The incision was made in continuation of the anterior axillary line. The patient had several attacks in which a mild pyæmic condition was developed in consequence of decomposition of the contents of the sac; he had numerous chills and his general strength and condition depreciated very much, and the symptoms lasted for weeks at each attack. Last summer he came under the care of Dr. Lange, who enlarged the opening by burning a large hole into the substance of the kidney sufficient to admit two fingers. The patient did well after this operation, excepting that a severe secondary hemorrhage occurred at the time the sloughs separated. But that was controlled and not long afterward the opening began to diminish in size, and pus accumulated again. After about two months had passed, Dr. Lange decided to remove the kidney, and the operation was performed five weeks ago. It was exceedingly difficult, on account of the kidney being imbedded in a mass of cicatricial tissue, and it was impossible to remove the organ without injuring the peritoneum. The operation, however, went on fairly well, although there was rather free hemorrhage from numerous small vessels, until—being obliged to work entirely by touch—finally he encountered a firm, cord-like structure, which, from its feel, he regarded as a band of cicatricial tissue and divided it with scissors. Although situated at the upper end of the kidney, near the supra-renal capsule, it proved to be the renal artery and a profuse hemorrhage at once occurred. The finger was immediately placed over the mouth of the open vessel, and then a pair of forceps, such as are used in ovariotomy for seizing the sac, were applied. It was not advisable to apply a ligature. The same would probably have slipped. On account of the loss of blood he was unable to thoroughly disinfect the large wound—several small cysts filled with offensive pus had burst and emptied into it—but was compelled to clean it as quickly as possible, and powder it completely with iodoform. The forceps were left *in situ*. The patient rallied and during the first twenty-four hours did quite well. The wound was left open, except being loosely filled with borated cotton and covered with antiseptic gauze.

On the second day it was very evident that the patient was losing ground, and he died on the third day.

At the autopsy it was found that the other kidney was the seat of fatty degeneration, as was also the liver. There was peritonitis, but not extensive. There was septic infiltration of the cellular tissue along the spine. The renal artery had been divided about half an inch from its origin in the aorta. Badenheuer had reported a case in which there was hemorrhage, and he drained the peritoneal cavity and the patient recovered. In that case there was some difficulty in loosening the kidney, until he cut directly through the capsule, and then he was able to pull it out easily. To remove the organ in that way in Dr. Lange's case was impossible, and such a separation could not be made even in the post-mortem specimen.

Dr. Peters asked if any of the members thought it possible to have made the diagnosis more complete by means of manual examination through the rectum. It seemed to him, from the little experience he had had in examination by means of the hand carried into the rectum, that very likely it would not have been.

Dr. Briddon thought that not much information was to be gained by the procedure, and certainly it was not unattended by danger.

He once examined a patient, several years ago, who was an inmate of the Presbyterian Hospital, and had an abdominal tumor, the character of which was doubtful. There was no difficulty in manipulating, but he was unable to distinguish between different organs with the precision necessary for diagnosis. He thought he recognized an enlarged spleen. The patient died twenty-four hours afterward, and at the autopsy there was found a splenic tumor, which had

a large cyst, the walls of which were agglutinated to the omentum, and at that point the cyst, which was thin as tissue paper, had ruptured, and poured its contents into the peritoneal cavity. He should hesitate very much before resorting to the method in any case.

Dr. Hutchison thought that the liability to do damage depended somewhat upon the size of the hand. Simon limited the size to ten and one-half inches in circumference.

Dr. Peters said that the reason he did not make the examination in his case was because ordinary examination gave a great deal of pain, and he was afraid of the existence of a thin cyst wall, and dared not interfere.

Dr. Briddon thought the great danger was the liability to encounter cysts with thin walls and rupture them.

Dr. Weir said that, prior to the operation, he thought they had sufficient data upon which to base a diagnosis without resorting to a rectal examination, which, in his opinion, was not altogether free from risk. But he had since concluded that probably a better appreciation of the tumor would have been obtained by resorting to Simon's method. Although the upper border of the tumor probably could not have been reached, yet the hand quite likely would have passed behind the elongated liver, and thus it would have been known that it was not a kidney tumor.

Dr. Peters thought that that view might have been corroborated by the autopsy. At all events, he would not be willing in another case to regard the diagnosis complete unless Simon's method had been practised.

Dr. Weir remarked that Dr. Lange's cases supplemented one which he had had in the Roosevelt Hospital, about six years ago. For the relief of a pyonephrosis, he made an incision in the loin, which evacuated the matter and revealed a much disorganized tubercular kidney, which he wished to remove, but the proposition was overruled by his colleagues in consultation, and a drainage-tube was inserted and the case left to the processes of nature. The man went on very well for six weeks, and then unfavorable symptoms developed and he died of peritonitis.

The autopsy showed peri-nephritic inflammation, with suppuration in places, and peritonitis. At the time the nephrectomy was proposed the kidney could have easily been removed. At the time of death, however, it was so firmly fastened by inflammatory processes that it could not have been removed, except with very great difficulty and with great risk to the peritoneum.

Pyonephrosis, with and without calculi, had been a cause for nephrectomy in seventeen cases with seven deaths.

Dr. Post presented a portion of dead bone removed in a case of

NECROSIS OF THE UPPER PART OF THE SHAFT OF THE HUMERUS.

The patient was a boy, fifteen years of age, who came to his clinic three weeks ago. Seven months before, he had injured his arm, and inflammation followed. After two or three months, an opening was made about a hand's breadth below the shoulder and pus evacuated, and the discharge continued. A recent abscess had formed higher up toward the axilla, upon the inner side, not far from the axillary vessels. Fluctuation existed, and Dr. Post opened the abscess, which evacuated a quantity of pus, and then injected a carbolized solution (1 to 40) when he found that it communicated with another sinus that had existed for some time. Carbolized dressings were applied. At the end of a week the inflammation had subsided, and he then went through the deltoid with a longitudinal incision, exposed the upper part of the shaft of the humerus and removed the portion of dead bone presented. The necrosis was limited by the epiphyseal cartilage. He had observed the same thing, in persons of that age, in a number of instances, the head of the bone being apparently sound, the necrosis extending no farther than the cartilage. He asked if necrosis of the humerus, in persons of that age, was not apt to be limited by the epiphyseal cartilage. He was inclined to think that it was a pretty general fact.

Dr. Post also presented a conical pistol-ball which he had removed from the outer side of the lower jaw.

The society then proceeded to the transaction of miscellaneous business.

Correspondence.

THE MEDICAL MISSIONARY HOSPITAL AT CANTON, CHINA.

To the Editor of The Medical Record.

Sir: It has occurred to me that a few items from your antipodes might not be without interest, and coming directly from the field it may also increase interest in that vital subject of medical missions. Did space permit, we would like to give some statistics from a number of similar institutions on heathen soil, but can only give the salient points of the work as found here in Canton.

The Medical Missionary Hospital of Canton was begun in 1834 by Dr. Peter Parker, of Yale College, now in Washington, D. C. He was under commission of the American Board of Missions, and was the first medical missionary in China. As early as 1805, however, Dr. Pearson, surgeon of the old East India Company, at Canton, began the good work by introducing vaccination, and superintended the practice in the hands of a native vaccinator for many years. And at Macao, about ninety miles south from here, Dr. T. R. Colledge, also of the East India Company, conducted a dispensary from 1827 to 1832, treating 6,000 cases.

Notwithstanding the restrictions on foreign intercourse and the prohibition of missionary operations, Dr. Parker was able to open this hospital, which was resorted to by hundreds of patients, some even spending the night in the street to be sure of an entrance in the morning. The importance of such work being seen, the Medical Missionary Society in China was organized in 1838, and Dr. Colledge elected president, which connection was only severed last year by his death, when Hon. Peter Parker, M.D., was chosen in his stead, and Prof. S. Wells Williams, LL.D., now of Yale College, but long a resident of China, elected senior vice-president. In 1840, during the first war between England and China, the hospital work was suspended, and Dr. Parker, returning to the United States, labored in the interest of medical missions, and was the cause, while passing through Scotland, of the organization of the Edinburgh Medical Missionary Society.

In 1843, peace being restored, he reopened the hospital, and carried it on till 1855, up to which time over 53,000 cases were treated, and numerous surgical operations performed.

Dr. Parker again returning to America, Dr. J. G. Kerr, of Jefferson Medical College, Philadelphia, assumed the care of the hospital, under the Presbyterian Board of Missions.

Under this same management now the hospital is in a flourishing condition. During the past year there were 1,034 in-patients, 19,332 out-patients, and 1.115 surgical operations, many of them minor, but none the less important here. During 1879 eighty-one patients were admitted with urinary calculi; during 1880, sixty-six; and more this year, we understand, though we have not the exact figures. Most of these were removed by lithotomy, while Bigelow's instrument for crushing was used with success in a number of cases. The collection of preputial calculi is a marked feature of the hospital. There were two successful cases of ovariotomy last year.

There is in connection with the hospital a class of a dozen or more native students, who pay a small fee, and constitute the Canton Medical College. Becoming expert in the use of the knife, for which there is so much call here—there being no surgery in the native Chinese practice—a number have gone forth to play an important part. One is employed at coal mines near Tientsin, at a salary of $1,000 a year. The reputation of Drs. Wong, Kwan To, Tien Hee, and others, declares their ability.

The publication of medical works in Chinese was begun by Dr. Benjamin Hobson, his first work, on anatomy and physiology, being issued from Canton in 1850. It was followed by other treatises, as "The Principles and Practice of Surgery," "Practice of Medicine," and a "Manual of Midwifery," which volumes, Dr. Lockhart says, will be of incalculable benefit to the Chinese; and were this all that Dr. Hobson had done it would be worth the labor of a lifetime. To these Dr. Kerr has added a "Chemistry," in four volumes; a "Materia Medica," in two volumes; "Manuals of Skin and Eye Diseases;" brochures on "Diagnosis," "Syphilis," and "Bandaging;" a treatise on "Fevers and the Digestive Organs;" and has an "Operative Surgery" in print, containing many excellent illustrations. A medical journal in the Chinese language—the *Said San Po*—has also been begun.

Dr. Kerr has been making his influence felt through all the province, while in the city there have sprung up—more or less directly the result of this hospital—two other hospitals, two dispensaries, two drug stores, a number of offices for the practice of foreign dentistry, several missionary dispensaries outside the city, and a "vaccination hall" lately opened. Accompanying Dr. Kerr thither recently, we found extensive and finely furnished Chinese apartments, where he has been requested to teach a class of some five hundred Chinese in the art of vaccination. Another feature of this new establishment is the purchase and care of female infants about to be destroyed by their parents. Female infanticide is one of the crimes of China, as is well known.

Dr. Kerr last year attended upon His Excellency the Viceroy, and gave him chloroform for a minor operation of the foot. He was greatly pleased with the wonderful medicine. Their Excellencies the Viceroy and Hoi-kwan each make an annual contribution of two hundred dollars to the support of the hospital.

We note also by the China mail that Dr. Mackenzie, in much favor with Viceroy Li Hung Chang, has been called to Peking to attend H. E. Kwang, lately appointed First President of the Board of Civil Office. Thus are important avenues to a lasting good influence opening up on every hand and inviting entrance, and the finest field for medical missions, as Dr. Henderson has declared, is China. Of five medical missionaries sent out by the Presbyterian Foreign Board last year, three are come to China.

Jos. C. Thomson.

Canton, China, February 11, 1882.

NERVE-STRETCHING.

To the Editor of The Medical Record.

Sir: The lively interest manifested by the profession upon the subject of nerve-stretching will doubtless be enhanced by the interesting and timely paper by Dr. Morton, read before the New York Neurological Society, a synopsis of which appeared in the Record of March 4th, and your editorial upon the same subject. It should be a matter of pride that not a little of the knowledge already acquired is due to investigations made by American physicians. The subject, however, appears to have been studied wholly with reference to its bearings upon surgery, or to the anatomical changes which ensue to the brain, the spinal cord, and the nerve itself, as a result of stretching.

Thus far investigations appear to show:

First.—That paralysis of sensation is more pronounced than paralysis of motion, while the latter is more persistent than the former.

Second.—That the effect upon the cord from stretching is negative.

Third.—That the irritability of the nerve-trunk is modified, or may be temporarily destroyed.

Fourth.—That stretching a nerve not only acts upon itself, but likewise has an action upon the nerve of the opposite side.

Fifth.—That the cohesion of the nerve-sheath or nerve-fibrils is affected by the nerve sliding within its sheath, thus breaking up the adhesions and relieving the nerve of pressure.

Sixth.—"That there may be a rapid coagulability of the medullary sheath, a separation of the sheath from the neurilemma, or a solution in the continuity of the axis-cylinder and medulla, as a result of the violence done."

Seventh.—That the best results from nerve-stretching are obtained not by feeble and sudden, but by vigorous and prolonged, stretching.

Thus far the physiology of nerve-stretching has either been overlooked or completely ignored. The knowledge of nerve-stretching, now in its transition state, is merely empirical knowledge, and cannot become scientific until more attention is given to the physiology of the subject.

There are many interesting problems relating to physiology connected with the procedure of nerve-stretching. Space forbids a mention of but two:

(*a*) What influence upon the nutrition of the cord follows stretching a nerve?

(*b*) What influence does stretching a nerve have upon the vascular mechanism; and if any, through what kind of nerve-fibres and in what way is this influence manifested?

Division of a nerve supplying a muscle quickly and greatly increases the venous flow of blood, showing a dilatation of the muscular arteries. Does *stretching* a nerve produce the same phenomenon?

If this be answered affirmatively, the following question naturally arises: Does this condition obtain in nerves only whose irritability has been destroyed? Again, when an animal—a kitten—is warmed in a heated chamber till the feet become red from dilatation of blood-vessels, division of the sciatic nerve causes the foot of the same side to become paler (Schiff). Has a similar change in the vascular mechanism followed the stretching of the sciatic nerve in man?

If *stretching* the sciatic nerve in man produces modified anæmia (observed in the kitten after *division*), does the nerve-stretching act as a stimulus to the dilator-fibres of the blood-vessels, or is it due to loss of central tonicity, or both? I think these and other questions relating to the physiology of nerve-stretching are sufficiently important to receive careful investigation at the hands of Dr. Morton or some other American neurologist.

TALBOT JONES.

St. Paul, Minn.

SIMULTANEOUS FRACTURE OF BOTH CLAVICLES.

To the Editor of The Medical Record.

Dear Sir: In looking over Professor F. H. Hamilton's last edition of his "Treatise on Fractures and Dislocations," I notice that under the heading of "Fractures of the clavicle," he remarks that "a double fracture or a simultaneous fracture occurring in both clavicles seldom occurs." He records but two cases, both occurring in young boys, while Malgaigne, at the Hotel Dieu, saw but one instance in two thousand three hundred and fifty-eight cases, and recollects only five other examples. Professor H. thinks these double fractures "occur more often in children than in adults, and are of the character of partial fractures without usually much displacement." This may be the rule in general. I am, however, enabled to contribute one case where a fracture of both clavicles occurred in an adult.

P. R. P——, aged about fifty, by the upsetting of a load of hay upon which he was riding, was thrown into an angle of an old-fashioned rail fence, striking in such a manner against the rails that both clavicles were broken. I was called to attend the case. Both fractures were complete. The usual dressings were applied in order to keep the shoulders drawn back and the broken ends as near in opposition as possible. The patient was quite restive under the dressings, and would not submit to the necessary confinement, but insisted on using his right arm. The left clavicle had a good union; in the right no union took place, and a false joint was the consequence. A few years later he was thrown from a wagon and killed, and thus the case terminated.

I forward you this report that it may be added to the list of this unusual accident.

Yours, etc.,

GEORGE BURR, M.D.

Binghamton, N. Y.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 23, 1882, to April 29, 1882.

JAQUETT, G. P., Major and Surgeon. Granted leave of absence for six months on surgeon's certificate of disability. G. O. 97, A. G. O., April 27, 1882.

MAUS, L. M., Capt. and Asst. Surgeon. Having reported at these headquarters, will proceed to Fort Lewis, Col., and report to the commanding officer for duty. S. O. 86, Dept. of the Missouri, April 24, 1882.

PORTER, JOSEPH Y., Capt. and Asst. Surgeon. His leave of absence for one month, granted him in S. O. 32, Dept. of the South, March 14, 1882, extended one month, with permission to apply for a farther extension of twenty days. S. O. 17, Mil. Div. of the Atlantic, April 25, 1882.

GARDINER, J. DE B. W., Capt. and Asst. Surgeon. Telegraphic instructions of this date, assigning him to duty at Fort Huachuca, A. T., confirmed. S. O. 57, Dept. of Arizona, April 19, 1882.

GARDNER, EDWIN B., Capt. and Asst. Surgeon. Having reported at these headquarters, is assigned to temporary duty at Vancouver Barracks, Wash. Ter. S. O. 50, Dept. of the Columbia, April 14, 1882.

SHUFELDT, R. W., Capt. and Assistant Surgeon. Granted leave of absence for three months from May 1, 1882. Relieved from duty in the office of the Surgeon-General, to take effect May 1, 1882, and upon expiration of his leave to report by letter to the Surgeon-General. S. O. 92, A. G. O., April 21, 1882.

ROBINSON, S. Q., Capt. and Asst. Surgeon. Having reported at these headquarters, is assigned to duty at Fort Spokane, Wash. Ter. S. O. 50, C. S., Dept. of the Columbia.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 29, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 22, 1882.	7	7	236	2	137	93	21	0
April 29, 1882.	4	9	201	3	137	81	14	0

KENTUCKY STATE MEDICAL SOCIETY.—The twenty-seventh annual session was held at Louisville, April 5th, 6th, and 7th, 1882. The society convened in the rooms of the Polytechnic Society of Kentucky in the City of Louisville, at 2.30 P.M. on April 5th. The reports of Committees and the annual address by the President, Dr. J. W. Holland, of Louisville, occupied the session of the first day. The annual address of the President was entitled "Our Thirtieth Year," and abounds in interesting discussions relating to the society and its work, both retrospective and prospective. Dr. Holland took up in detail the subject of State medicine; vital statistics; medical education; the regulation of the practice of medicine and medical ethics, especially as relating to the profession in the State of Kentucky. The address is published in full in the Louisville *Medical News*.

On the second day Dr. W. O. Roberts, of Louisville, made an elaborate report on the progress of surgery. Dr. W. H. Wathen, of Louisville, followed with a paper on abdominal section *versus* craniotomy, when Dr. Comes, of Louisville, discoursed on color-blindness, exhibiting and describing an ingenious instrument for its detection. Dr. Lunsford P. Yandell, also of Louisville, made an elaborate report on dermatology, after which Dr. Mathews, of Louisville, read a paper on stricture of the rectum and its treatment by divulsion. Dr. Ap Morgan Vance, of Louisville, reported a successful case of double osteotomy (supra-condyloid method) for the cure of genu valgum, and also read an interesting and instructive paper on the treatment of spinal deformities. The following papers were also read: "Cerebro-Spinal Meningitis," by Dr. J. A. Larabee; "Obscure Brain Lesions," by Dr. A. H. Kelch; "Acute Bromism," by Dr. A. M. Carlbige; "On the Deteriorated Quality of Spectacle Glasses," by Dr. Dudley S. Reynolds; on "Ovariotomy, with a Report of eight cases," by Dr. D. W. Yandell. Previous to adjournment, the Committee on Ethics made the following report:

"*Whereas*, The Medical Society of the State of New York has departed from the Code of Ethics of the American Medical Association, and adopted a revised system of ethics, it seems proper that this society should give expression to its views upon this important subject. Therefore, be it

"*Resolved*, That the Kentucky State Medical Society regards the Code of Ethics of the American Medical Association the best system of ethics for the guidance of honorable medical men now in existence, and that we hereby declare our unfaltering and firm adherence to its principles, and must deprecate any alteration at this time in its honored teachings.

"*Resolved*, That our representatives at the approaching meeting of the American Medical Association be, and are hereby, instructed to give their vote and influence in favor of unqualified adherence and fidelity to the code as it now stands."

On motion, the society then adjourned.

American Medical Association.—The Thirty-third Annual Session will be held in St. Paul, Minn., on Tuesday, Wednesday, Thursday, and Friday, June 6, 7, 8, 9, 1882, commencing on Tuesday at 11 A.M.

"The delegates shall receive their appointment from permanently organized State medical societies and such county and district medical societies as are recognized by *representation in their respective State societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States."

"Each State, county, and district medical society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of medical societies as above designated are earnestly requested to forward *at once* lists of their delegates.

Sections.—"The chairmen of the several sections shall prepare and read in the general sessions of the Association papers on the advances and discoveries of the past year in the branches of science included in their respective sections. . . . ."—*By-laws*, Art. II., Section 4.

Practice of Medicine, Materia Medica, and Physiology.—Dr. J. A. Octerloney, Louisville, Ky., *Chairman;* Dr. D. J. Roberts, Nashville, Tenn., *Secretary.*

Obstetrics and Diseases of Women and Children.—Dr. H. O. Marcy, Boston, Mass., *Chairman;* Dr. C. V. Mottram, Lawrence, Kan., *Secretary.*

Surgery and Anatomy.—Dr. —— ——, *Chairman;* Dr. W. A. Byrd, Quincy, Ill., *Secretary.*

State Medicine.—Dr. A. L. Gihon, U. S. Navy, *Chairman;* Dr. J. H. Sears, Waco, Texas, *Secretary.*

Ophthalmology, Otology, and Laryngology.—Dr. —— ——, *Chairman;* Dr. J. Solis Cohen, Philadelphia, *Secretary.*

Diseases of Children.—Dr. S. C. Busey, Washington, D. C., *Chairman;* Dr. William Lee, Baltimore, Md., *Secretary.*

Dentistry.—Dr. D. H. Goodwillie, New York city, *Chairman;* Dr. T. W. Brophy, Illinois, *Secretary.*

A member desiring to read a paper before any Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-laws.*

Committee of Arrangements.—Dr. A. J. Stone, St. Paul, Minn., *Chairman.*

Amendments to the By-laws.—Offered by Dr. D. H. Goodwillie, Art. II., Section 8. Permanent Members: strike out the words "but without the right of voting."

Offered by Dr. J. H. Packard, Regulation II., par. I., to read "as permanent members or members by application."

Regulation VI., line 4, strike out 5 and insert 10. Second paragraph, lines 4 and 5, strike out all after "publication" to and including "Association," and insert "publication."

Regulation IX. Add new paragraph: "Members by application shall consist of such members of State and county societies, in good standing, as shall make application in writing for admission. They shall simply have the right to receive the Journal on the same terms as other members."

Regulation IV., par. 6, strike out all from "see," in line 7, to "and" in line 9.

Regulation V., par. 3, after "published" insert "in such manner as the Association may direct."

William B. Atkinson, M.D.,
Permanent Secretary.

Medical Society of New Jersey.—The One Hundred and Sixteenth Annual Meeting of the Medical Society of New Jersey, will be held in Educational Hall, at Asbury Park, on Tuesday 23d instant, at four o'clock P.M., and will continue in session the following day. The Grand Avenue House will be in readiness for guests.

Quackery.—A sharp discussion upon this rather trite subject took place at one of the South London Branches of the British Medical Association. Mr. Nelson Hardy read a paper on "Quackery, Ancient and Modern," concluding it with the following propositions: 1. Quackery is more profitable pecuniarily than scientific medicine, but not so profitable mentally or morally. 2. Quackery most readily finds its victims among the highest and lowest social strata, not among the more intelligent middle classes; readily also among religious people, hence certain

quacks always advertise largely in the (so-called) religious periodicals. 3. Quackery in various forms has always been intimately connected with the practice of medicine, and has always impeded scientific progress. Dr. Dowse, who followed the speaker, wanted to hear more about the sly advertising done by members of the profession, which was really a kind of quackery. He also wanted a definition of a quack. He thought Mr. Hardy had been too severe on certain forms of cures. So long as a medical man cured his case and did not resort to villany, it was of no consequence what method he took. Mr. Barwell said that any medical man who cheated was a quack, while he who believed in the efficacy of a decillionth of a grain was only a lunatic. Mr. Hardy asserted the claims of scientific and rational medicine. He thought it quackery to use patent medicines, even if they cured.

A Question on Ethics.—A correspondent asks the following:

"Mr. Editor: Will you kindly answer a few questions on the Code through the columns of the Record. First, a statement of facts.

"Mr. A—— removes with his family into a town where there is no near physician in active practice, and having occasion for the services of a physician, Dr. B——, who resides in a neighboring town, is consulted and is employed until a physician, Dr. C——, removes to town, after which event, about three years, they have employed Dr. C——.

"Recently Mr. A—— met with an accident. A messenger was dispatched for Dr. C——, who at the time was out of town and was not expected for two or three hours; consequently a messenger was sent for Dr. B—— who dressed the wound, etc., and made appointment to see the case again. Now, which of these physicians can claim to be the 'family physician' of the Code—see Art V., Sec. 6; and what were the individual duties of both Dr. B—— and Dr. C—— in the case?"

[Dr. C—— having been called in an emergency, should consider the case as belonging to Dr B—— who is evidently the family physician, and should resign the case to him, unless he, Dr. C——, is specially requested by the patient to continue his attendance.—Ed.]

English Undertakers are enterprising, to use the mildest term. They send around circulars to the medical men, offering a per cent. on the business sent them!

Eating Before Sleeping.—Man is the only animal that can be taught to sleep quietly on an empty stomach. The brute creation resent all efforts to coax them to such a violation of the laws of nature. The lion roars in the forest until he has found his prey, and when he has devoured it he sleeps over until he needs another meal. The horse will paw all night in the stable and the pig will squeal in the pen, refusing all rest of sleep until they are fed. The animals which chew the cud have their own provision for a late meal just before dropping off to their nightly slumbers.

Man can train himself to the habit of sleeping without a preceding meal, but only after long years of practice. As he comes into the world nature is too strong for him, and he must be fed before he will sleep. A child's stomach is small, and when perfectly filled, if no sickness disturbs it, sleep follows naturally and inevitably. As digestion goes on the stomach begins to empty. A single fold in it makes the little sleeper restless; two will waken it; and if it is hushed again to repose the nap is short. Paregoric or other narcotic may close its eyes again, but without either food or some stupefying drug it will not sleep, no matter how healthy it may be. Not even an angel who learned the act of minstrelsy in a celestial choir can sing a babe to sleep upon an empty stomach.

We use the oft-quoted illustration, "sleeping as sweetly as an infant," because this slumber of a child follows immediately after its stomach is completely filled with wholesome food. The sleep which comes to adults long after partaking of food, and when the stomach is nearly or quite empty, is not after the type of infantile repose. There is all the difference in the world between the sleep of refreshment and the sleep of exhanstion.

To sleep well the blood that swells the veins in the head during our busy hours must flow back, leaving a greatly diminished volume behind the brow that lately throbbed with such vehemence. To digest well, this blood is needed at the stomach and nearer the fountains of life. It is a fact established beyond the possibility of contradiction that sleep aids this digestion, and that process of digestion is conducive of refreshing sleep. It needs no argument to convince us of this mutual relation. The drowsiness which always follows the well-ordered meal is itself a testimony of nature to this interdependence.—*New York Journal of Commerce.*

Fahrenheit and Centigrade.—

From Centigrade to Fahrenheit,
'Tis easy to divine—
You first must use arithmetic
And multiply by nine,
The answer now divide by five,
And then you have in view
The very number that you seek,
By adding thirty-two.

From Fahrenheit to Centigrade,
However, it is plain—
You first must take the thirty-two
And multiply again.
But this time only by the five,
And then you draw a line
Straight up and down, in order that
You may divide by nine.

The Sale of Milk.—A bill has recently passed the Legislature of New Jersey prohibiting the sale of skimmed milk without letting the customer know that it is such. The cans are to be labelled "skimmed milk." The law is very radical in its attempt to compel the furnishing of pure milk. It forbids feeding the cows upon the distillery waste known as "swill," or upon any substance known as unwholesome.

Ague and the Spots on the Sun.—According to the humorous editor of the *New York Times*, a Dr. Merritt, of Chicago, defends with great ingenuity the theory that chills and fever are caused by the spots on the sun. This is quite as good a view as some already current.

The Jumbo of all Recent Pathological Aggregations was a tumor weighing forty-two pounds, and removed from the scrotum of a patient living in Bombay. It was of course a case of elephantiasis Arabrum.

Small-Pox in Cincinnati had at last reports been increasing very rapidly, and cases were being reported at the rate of thirty or forty per day. The trouble has been largely due, it is said, to a failure of the German population to get vaccinated.

Wax in the External Meatus.—Weil found, in examining 5,905 children, wax in the ear in eleven per cent. of the boys, and fifteen per cent. of the girls.

Fined for Practising Without a License.—"Dr." Richard C. Flower, of No. 439 Fifth Avenue, indicted on complaint of Frederick R. Sturgis for practising medicine without a license, pleaded guilty in the General Sessions Court. Judge Cowing imposed a fine of $200, which was promptly paid by Dr. Flower, who will probably soon resume his practice.

Uselessness of Antiseptics in Ocular Surgery.—In a report of his seven hundredth case of cataract extractions, Dr. H. Knapp (*Arch. of Ophthalmology*, September 1, 1881) says: "I freely confess that the advocates of antisepsis in eye-surgery have thus far failed to convince me of the utility of their varied procedure, and I do not think it incumbent upon me to waste time by what I consider to be superfluous complications of treatment. For two years and a half I had no case of suppuration after any operation on the eyeball, but three occurred lately. I think the statistics of those who use antiseptic means are no better."

Dr. Lamson's Mental Condition.—Sixteen affidavits in Dr. Lamson's behalf were sent to London by the Attorney-General. The affidavit of Irving McElroy sets forth that Lamson, in 1877–78, was addicted to the extravagant use of opium and atropine, from which his mental and physical condition was seriously affected. Others make similar affidavits. Dr. Winston, of the New York Life Insurance Company, affirms that he had Lamson under treatment last year, and found his mind to be greatly impaired from an excessive use of opium. The other affidavits are from Dr. H. H. Kane, of this city; Dr. John Swinburne, of Albany; Dr. D. Murray, Rolland Porter, and others. They all tend to show that Lamson's mind was impaired from an intemperate use of drugs. As early as 1877, according to one affidavit, Lamson showed a marked tendency toward insanity.

The evidence, on the other side, to the effect that Lamson was a cheat and a scamp, is very considerable.

M. Pasteur's Discoveries Applied.—An application to man of M. Pasteur's researches on the preservation of animals from malignant pustule has been reported by M. Casson, in a note read at a meeting of the Académie des Sciences. He described the case of a farmer who had been twice attacked by charbon. The first attack was slight; the second was very serious, and expected to be fatal. However, the dangerous symptoms speedily disappeared, leaving two deep ulcers on the back of the hand. M. Casson considers that the rapid improvement indicates an actual vaccination resulting from the first attack of charbon, and suggests that the case confirms the facts established by M. Pasteur's researches on the preservation of animals by the inoculation of attenuated virus.

The St. Louis Medical Society and the Code.—This society recently received a majority report on the Code recommending inaction, and a minority report recommending the changes recently adopted by the St. Louis Medical Society, and also recommending that the provision in the Code against advertising be abolished.

The Khedive of Egypt has created Dr. Warren Bey, the well-known American physician of Paris, a commander of the order of Osmanić, as a further recognition of his brilliant professional career in Cairo and in Paris.

The College of Physicians and Surgeons of Chicago announces that thirteen of its chairs have been filled.

Dr. Reuben A. Vance has been appointed to the professorship of Operative and Clinical Surgery in the medical department of Wooster University, at Cleveland, O.

The Tennessee State Medical Society.—The next meeting of the Medical Society of the State of Tennessee will be held in Memphis, commencing the second Tuesday in May.

A New Remedy for Asthma.—From more than one quarter it is reported that Australia posseses a valuable remedy for asthma, which might with advantage be more generally known. A species of *Euphorbia* indigenous to Queensland, and designated *E. pilulifera*, is used locally with the best results in asthmatic and bronchial affections. An ounce of the leaves of the plant placed in two quarts of water, and allowed to simmer until the quantity is reduced to one-half, affords a medicine which, taken a wineglassful at a time twice or thrice a day, is credited with the power of relieving the most obstinate case of asthma, as well as coughs and ordinary chest affections. The leaves may easily be gathered and dried, and will keep for a considerable length of time. Other species of the *Euphorbia* have already acquired some reputation for their medicinal virtues; thus the leaves of the *E. nereifolia* are prescribed as a purgative by the native practitioners in India, while the root of the *E. ipecacuanha* is said to be equal in all respects to the true ipecacuanha. —*Medical Times and Gazette.*

Relief of the Pain in Lead Colic—A Novel Method of Getting Poisoned.—Dr. Geneuil, in a note to the *Bulletin de Thérapeutique*, after alluding to the various means adopted for the relief of the terrible pains of lead colic, as rubefaction by synapisms, chloroform, electricity, and hypodermic injections of morphia, relates a case to which he was called in the country, where none of these means were at hand, and in which he succeeded in giving complete and permanent relief by a very simple procedure. Having directed a napkin to be heated at the fire, he first applied a towel wetted with almost ice-cold water to the whole surface of the abdomen, while the patient was shrieking with pain, and having retained it there for four or five seconds, rapidly replaced it by the almost burning napkin. The effect was like enchantment, the pain instantly disappearing and sleep following, without any return of suffering. The cause of the colic was at first obscure, but was found to depend upon the patient, who was an inveterate smoker, and had very often in the day to relight his pipe, which he did by means of matches colored with chromate of lead.

Secret and Proprietary Medicines.—Dr. Jordan, in the *Chicago Medical Times*, closes a well-written article on certificates given in favor of nostrums as follows: "What a blessing secret and proprietary medicines are! In summary, these blessings may be briefly told: 1. The use of them destroys the confidence and respect of the patient. 2. They lead to a routine practice highly beneficial to the undertaker.

3. They lessen the labors of the physician by enabling the patient to do his own prescribing. 4. They lead to fatal delays in calling in the physician, thus improving the marble business. 5. They support medical journals and induce editors to put to shame the exploits of Munchausen. 6. They increase the rate of mortality, and thus aid in preventing the over-crowding of population. 7. They enable our distinguished professors to advertise themselves both to the medical and non-medical world, and very nicely enable the laity to find out the exalted merit of our professors and other great men. 8. They bring the medical profession to the level with patent-medicine men, and exalt the latter to the position of dictators to the medical profession."

The Philadelphia County Medical Society and the New Code.—At the stated meeting of the Philadelphia County Medical Society, held April 19, 1882, the following resolutions were adopted:

"*Resolved*, That this Society reaffirms its adherence to the principles of the Code of Ethics of the American Medical Association, and declares that, in its opinion, for a physician to extend professional recognition to irregular practitioners, is to patronize and encourage irregular practice; and is alike inconsistent with honesty of purpose and the pursuit of medicine as a science.

"*Resolved*, That this resolution be referred to the Pennsylvania State Medical Society at its next annual meeting."

Convulsions in Resuscitated Children.—Dr. C. H. Preston, of Davenport, Iowa, writes: "In the proceedings of the New York Academy of Medicine, reported in your number for April 15th, just at hand, Dr. Post, in the course of a discussion on the subject of still-births, refers 'to the tendency to the occurrence of convulsions within twenty-four or thirty-six hours in resuscitated children.' Having just seen an apropos case, I send you a note of it, hoping it may contribute to a solution of the pathological problem involved in the occurrence of these convulsions which are so apt to make the labor of resuscitation vain. Excluding mechanical injury, is not the cause of death probably a carbonic acid poisoning of the nervous centres from long retention of the natural pulmonary excreta?

"On the 17th inst., at 12.30 A.M., I delivered a lady of her second child, a well-developed male, breech presentation. The child was still-born, white, cold and pulseless, with flaccid lids and lips. On auscultation, however, an occasional heart-beat could be detected, and after more than an hour's persistent effort with hot-wrung flannel wraps and artificial respiration after the manner recommended by Dr. Shrady in the discussion alluded to—a method which insures inflation of the lungs—I succeeded in restoring vitality.

"About half an hour afterward, respiration was again suspended for a few moments during a slight spasm, chiefly noticeable in the muscles of the lower jaw. Afterward the little patient rested quietly, nursing at intervals, and being apparently all right, with the important exception of an occasional setting of the jaw, and a constant tendency to flexion of the forearms upon the arms. Death occurred suddenly in a convulsion at 1.30 A.M. of the 18th, a little less than twenty-four hours from the time of resuscitation."

Drawn or Undrawn Fowls.—Dr. H. R. Porter, of Bismarck, D. T., writes: "You say that 'there seem to be no definite facts as to which "will keep longer, drawn or undrawn fowl." *Facts* demonstrate in this part of the country that drawn fowl keep longer. Hunting parties here, who go out in the fall and kill immense numbers of prairie-chickens, ducks, geese, etc., always take out the entrails of all they bring home for use or to ship, for the reason that they keep longer. I know from actual experience that birds shot the same hour and drawn will keep and remain sweet three days longer than the undrawn. Have also noticed that where the viscera is allowed to remain for any length of time the flesh has a decided intestinal flavor, not at all agreeable, except to *very gamy persons*."

The Origin of Hospitals.—We do not know why Mr. Huxley is interested in the origin of hospitals, or what they have to do with zoology. He has, however, been investigating the subject, and announces, with a kind of "hoop-la," that hospitals are not Christian institutions, but were first established by the Æsculapian priests. This may be a new thing to zoologists, but it can hardly be so to any one having the slightest acquaintance with the origin of medical science. In the descriptions of the temples of Æsculapius they are always referred to as a kind of hospital. They were not hospitals according to the modern or Christian idea, however, since faith was more than works in therapeutics, and payment in some form was expected. These institutions died out finally, and then hospitals were established by Christian Europe, being then entirely new things, neither modelled after nor suggested by the Æsculapian temples.

Tuberculosis in the Central Nervous System of Cows.—Some interesting cases in which the above disease occurs are related by a German veterinarian. The symptoms are characteristic: "In all cases the head is held high up (corresponding to the boring movement of the head in children), and in some cases twisted to one side. The eyes have a changed appearance. They are either staring or else are directed forward, or there is some form of strabismus. Often the pupils are unequal. The limbs become stiff. The hind legs may be paralyzed, or the animal falls down, and remains on its side, with stiffened extremities.

Generally the lungs are affected at the same time, and this fact will greatly help the diagnosis.

There may, perhaps, be a few tubercles in the meninges of the brain or cord for months; but the disease is essentially an acute one, just as it is in human beings.

That the tubercles are the true tubercles of bovine tuberculosis is shown by their developing, in some cases, directly on the dura mater of the brain in the form of little pedunculated tumors: so that the German name of "pearl disease" applies to it still when situated in this region. They also show a tendency to calcify, peculiar to the pearl disease.

The Test of Civilization, according to Lord Derby, is the death-rate. According to that, New York is considerably behind in the scramble.

The German Congress for Internal Medicine met at Wiesbaden April 20th, 21st, and 22d. It was opened by Professor Frerichs, of Berlin. Two of the most important discussions were that on the Pathology of Bright's Disease, opened by Dr. Leyden and Dr. Rosenstein, and that on the Antipyretic Treatment, opened by Dr. Liebermeister and Dr. Reiss.

Original Communications.

CASES OF MONOHYPOCHONDRIA AND MONOMANIA.

II.

By GEORGE M. BEARD, A.M., M.D.,
NEW YORK.

(Continued from page 317.)

A young lady was courted by a young man, in the usual way, and with quite as good opportunities for becoming acquainted with him, in his frequent calls and visits in the long winter evenings, as is customary in our city life. The courting and engagement lasted for a year, possibly more than a year. During the intimacy of this courtship she learned from him that he was nervous—not perfectly well—but saw nothing and heard nothing to lead her to suppose that there was anything more than nervousness. Not long after marriage she learned that he had some most remarkable symptoms: he was a monohypochondriac, to use the term that I employ. The peculiar form that this monohypochondria assumed in him was a love of taking medicine, and *a morbid fear that he should not take it exactly as ordered.*

Cases somewhat like this perhaps almost all of us have seen; but a case so remarkable as this, where the monohypochondria was carried to such a degree, is without precedent in my observation, and, so far as I know, in literature.

His fear was that he might omit a dose of medicine that had been ordered, or might take one dose more than was ordered, might take one drop more or less than the prescribed quantity, or might forget to take it at the precise moment when he should take it, or that he might take too much or too little exercise, or might not observe accurately the diet enjoined.

Not until he had been for some time under my care did I learn what the matter really was with him. The ordinary diagnosis in such cases is that the man is a fool; patients of this kind are usually almost kicked out of the office; but this man was not a fool, he was intelligent, well educated, a man of good sense and judgment in matters where his weakness did not enter. He served—is serving now—as book-keeper in a large house, where accuracy and faithfulness are needed. He can talk and act as sensibly as any other man, except where his special hypochondria is concerned.

The first week of marriage was a sad one to his wife, as was unfolded to her the weakness of her husband, which she interpreted as insanity, though it is not insanity, but would often be classed as such. When he first came to see me, he told me he had been doctoring eleven years, with a firm of charlatans in this city.

When he came to see me he would go over in detail just what he had been doing during the week, what exercise he had taken, how many minutes, how many times he had rubbed himself, what he had eaten and drank, just what medicine he had taken; and if he had omitted taking anything he was directed to take, he would speak of it in the most humble, apologetic, and terrified manner, as though he had committed the sin for which there is no remission, and most pitiable was the peculiar expression of his eye and countenance as he told the story of his failures and omissions; his appearance changed at once as he touched upon the doses of medicine, the exercise, and the hygiene. He who would work all day, and whom no one would suspect of weakness, became as a little child in the presence of this special, limited, and most peculiar of mental impairment. He would laugh about his trouble sometimes, would joke about it, and talk of it as though he understood it, but could not emancipate himself from it.

He would ask me such questions as these: "Shall I drink water at meals, or shall I drink milk? Shall I wash my hands in hot or in cold water? plain water, or with soap and water? What shall I drink? What shall I drink between meals? Milk? or water? Shall I drink beer? Shall I shave myself? if so, shall I use hot water or cold? How often shall I shave? every day? Shall I eat oysters? What else shall I eat? How often shall I eat? three times a day? How often shall I bathe? how many minutes at a time? What temperature shall I have the water?"

Many times he has come back, after leaving my office, with a repetition of these questions, having either not quite understood the answers or forgotten what the answer was. At one time I sent for his wife, whom I found to be a very intelligent, well-informed and sensible lady, and who quite well understood his case. She told me that his mother had the same peculiarity, and that one of their children—five years of age—manifested the same symptoms. She begged of me to give him orders to omit the treatment on certain evenings of each week, so that they might sometimes attend a theatre or other places of amusement, as it took him all the evening, nearly, to get through with the rubbing and bathing and exercising; for he claimed that it was impossible for him to go out at all if he did all that was ordered. The next time he came to see me, I accordingly told him to omit the baths and other treatments two evenings of the week, and that I would like to have him forget them entirely; that forgetting was really an important part of the treatment. With this he seemed quite pleased, and said he and his wife would be able to go out together sometimes. After this he would occasionally omit the treatment at other times—when he found it convenient to forget it—and thought he was carrying out my orders in so doing.

This man had other physical symptoms, for there was a real physical basis for his troubles. He had lumbar pains, very sensitive urethra, extreme constipation, bearing-down sensation in the genital organs, and occasional emissions. He was so sensitive that ice-cream would keep him awake at night, and wearing false teeth gave him emissions; any mental shock was felt in the perineum, just as it often is in the head or stomach.

This man is not a fool or a lunatic, and probably never will become a lunatic; rather he has switched off into this milder phase of mental impairment which, while it suggests insanity, is not insanity; he skirts the border-line, but will probably never cross it.

In this case there is seen what I have observed in many other cases of functional nerve-disorder, a peculiar and hard-to-be described expression of the eye *at the moment when the morbid fear is active.*

Thus, when he touched upon the subject of taking medicine, after having been talking of other matters, the eye showed instantly a change in expression—a change that takes place in the eye itself independent

of the muscles of the lids. This feature often suggests the expression that is noticed in the eye in trance, natural and artificial, and which is familiar to all students of trance, but it is not as profound; it is suggestive of *painful seriousness*, and it appears in anticipation of the words, for thought moves more quickly than the articular expression of thought.

This eye-peculiarity is noticed also in some of those who have morbid fear of places or of being alone. Thus the monophobiac previously described (p. 316) —the body-guard patient who must have two or three persons always with her while travelling—showed in her eyes when she even feared or suspected that she might be left alone.

Very important also in the above case is the concealment of the special morbid symptom from a sweetheart through a tolerably long courtship. Our most intimate friend may be a severe sufferer from some one of these morbid fears, and we never know or suspect it. In this case the wife soon learned what the lover had no means of learning. But wives do not always know their husbands in this respect —on one side or the other, or perhaps on both there may be intentional or unintentional deception; or the sufferer may fail to make his companion comprehend this ill-understood psychological phenomenon.

Very recently a gentleman from the west consulted me for morbid fear of travelling alone, so persistent and fixed that he could not go from his home beyond Chicago, eastward, to New York unless his wife were with him, although he could go more than a hundred miles alone. As with many of these cases, he carried with him on his travels a *small bottle of brandy*, thoroughly stopped, to use in case of emergency, which emergency never came, and consequently the bottle was never opened.

For nine years he had been married, but up to the moment when I was consulted his wife did not know of the existence of this fear of travelling alone in her husband, but supposed that he took her always on his long journeys *because he enjoyed her society*. So she again and again assured me. I regretted to be obliged to break so sweet a delusion, but feeling it to be necessary that she should understand her husband's real condition, I introduced husband and wife to each other, explaining to her in his presence that any friend in whom he had confidence would answer as a travelling companion nearly, if not quite as well as she. It is doubtful whether the wife believed me; it is probable that she preferred the pleasing deception; but at that very time the husband was so bad that, as he confessed to me, he could not have remained in New York but for the consciousness that his wife, or some one, was in the city with him.

The two following cases consulted me almost simultaneously:

A lady, about fifty years of age, had this peculiar symptom; she worried constantly about growing old. So much was she troubled by this fear of approaching old age that she hardly dared look in the glass. She became very much depressed in spirits. This was the third attack of this symptom from which she had suffered; she had recovered from the two previous attacks.

For several weeks she had not seen her husband, who understood her case and was very kind and attentive to her. She left him and went away on account of her miserable and unhappy condition; she was so despondent that she could not stay near him; she was perfectly wretched over her fear that she was growing old. There were other symptoms connected with this morbid fear; there was distress in the stomach, symptoms of dyspepsia, cold hands and feet, insomnia, fear of society, and for a long time there had been uterine ulceration.

From the other attacks this lady had recovered spontaneously; and, under treatment, she is rapidly recovering from the present attack.

Is this lady crazy? Is it a case of melancholia? All physicians who classified it at all would probably call it melancholia, although they might not use so strong a term as insanity, of which melancholia is but a variety.

To me it seems a border-line case, that occasionally crosses the border, for this reason, that she does not always respond to tests of insanity; she is not always out of harmony with her environment; her instinct of self-preservation is yet active; and, while she cannot control her feelings, she can and does, in a measure, at times, control the means of controlling her feelings.

The other case, which came to me about the same time, was a lady, between thirty and forty years of age. In this case, the hysteria had gone on toward, and very near, the border of insanity, but had not quite crossed the border-line. She said she was crazy, but I did not regard her as such, although I saw her when she was very bad indeed. Her worst symptom was a desire to choke her only child, whom she loved with her whole nature, and to whom she was perfectly devoted; and she also desired to choke her husband, whom she fondly loved. She confessed her desire freely, earnestly, and sorrowfully, and said it was hard, almost impossible for her to resist the inclination when these attacks came on her. I do not think she had any desire to choke me, or any one who was not especially dear to her; and I do not believe she will ever choke any one. I told her husband I believed both he and the child were entirely safe. *Morbid impulses are not, as all the authorities teach, necessary signs of insanity. Like morbid fears, they occur in the sane as well as in the insane. Those who study thoroughly their cases of neurasthenia, cerebral congestion, hypochondria and hysteria will find, or have found, that only in a limited number of instances do these morbid impulses go into actual insanity. In this respect each case is its own study.*

In this case, no doubt, hysteria had gone about as far as it could go without becoming absolute insanity; but there is no certainty that she will ever become insane; there is strong probability that she will be relieved. She was troubled—as these cases always are—before and during the time of the menses, with accompanying symptoms, such as attacks of spinal irritation, insomnia, catarrh, and piles; she was so nervous that she could not even write a postal-card without great distress; after writing a few words her neck would become so stiff that she could not write another line.

In this case, as in most cases, there had been a history of uterine troubles.

One of my patients has given me the history of an acquaintance, a lady over thirty years of age, who just before and during the menstrual period has an irresistible desire to destroy her clothing. If she does not find an old garment that she can rip or cut, she will attack a new one, no matter how valuable.

During these periods she sometimes takes her dresses, one after another, and rips them entirely apart, with the apparent intention of altering them; after the menstrual period has passed, she will spend

a week in putting a dress together precisely as it was before she commenced the work of destruction.

This lady is not generally sick; she has always enjoyed good health; but she is at times very nervous. As she grows older, she seems to be gradually overcoming this symptom without any special treatment.

The following case is a most remarkable and most interesting one. It is a border-liner.

A teacher, between thirty and forty years of age, gives the following history:

First.—She has an attack of insomnia which lasts several weeks at a time. These attacks are periodical, lasting about three months, and are accompanied by great excitability or exaltation: she also loses flesh considerably.

Second.—She then has an attack of depression, also lasting about three months; she is then well for a year, then goes the round again. She says these attacks of insomnia and depression with intervals of one year of health have gone on for twenty years or more.

Third.—There is mental irritability, which is common in cases of this kind.

Fourth.—Localized flushing on excitement, of a limited and circumscribed character. These symptoms are common enough in both sexes.

Fifth.—Uterine displacement.

Sixth.—Lumbar pain.

This patient wrote out for me in elaborate detail her symptoms and history, which I publish without any changes. It is a remarkably well-written document, and is an extraordinarily good analysis. I therefore publish it just as it is written, and it is well worth the study of students of this class of nervous diseases.

As a border-liner this patient is a type; she is not insane, she has not been insane, but she is sick, and has been sick, seriously sick at times, as this account makes clear; but at no time has her mental responsibility been so seriously impaired as to take away her force of will. While she thinks of poison, and thinks of suicide, and gloats on the idea, she does not commit suicide, and is not likely to do so.

"*First Stage—Buoyancy or Exaltation.* By exaltation I mean a feeling of being lifted up, a buoyancy, but not a feeling of exaltation—I think perhaps you misunderstood and thought that was the word I used. I cannot explain the *general* feeling any better, but in very bad attacks, after the sleeplessness has been running on for two or three months, I have fancied myself inspired by God to do or say, or more especially to write certain things to certain persons for their good. I happened upon one of these long letters, that by some mistake had not been sent, among some of my papers in my desk, one day after I had entirely recovered from one of these attacks and was quite myself again, and upon reading it over could scarcely believe that I had written it, and was only too thankful that it had never reached its destination. Since then I have guarded myself too closely to allow myself, when under the influence of these attacks, to write to any one except those who know well enough what the matter is with me, to make allowances. It is a relief to me to write things down in this way, and there is a fascination about it—I suppose because it feeds the inordinate egotism that seems a part of the disease; besides, it is much easier to write things than to say them, because my ideas are clearer when I am alone and do not get confused, but the act of writing them brings that flushed spot under the eyes that you noticed. Ordinarily, I have *no color whatever* in my face."

"A much more prominent element than that of exaltation is a feeling of hurry that is always a part of the insomnia from beginning to end—an element of fierceness and haste. Whatever I am doing, I feel as if I must hurry through with it. I lay plans rapidly, and they must be carried out in every detail at once. I must do it all, no matter who or what I trample on in the way. I used to fancy that I could not swallow during these attacks, and so was very irregular in the matter of eating, but I have found that I can eat everything, if I do it unconsciously and mechanically. For instance, during my last attacks I used to feel very much exhausted after I dismissed my pupils at one o'clock, but I was not in the *roused* state, which is fatal to sleep; but if I had gone to the lunch-table, or even if I had gone to any place in the house where food was kept, I ran the risk of coming in contact with some members of the family with an almost certainty of being thrown into what I call a roused state. And so my way was to take before school began something—it was generally a piece of bread of a sufficient size—to my bedroom, and as soon as my pupils left me I would go directly there and read some interesting book, meanwhile breaking pieces of bread and eating them, without any consciousness of swallowing them; if that did not succeed, I could always pace up and down and eat. About coming in contact with people—I get gradually so irritable that I not only cannot stand having the people who live in the same house speak to me or look at me, but cannot endure that they should think about me; it seems as if I could feel the friction of their thoughts touching me. If during my lonely meal in my bedroom it came into my head that the rest of the family were noticing (in their thoughts merely) my absence from the lunch-table, it would irritate and rouse me so that I could not—as I always, at least, tried to do—lie down directly after eating and sleep for an hour or perhaps half an hour. At the very earliest stage, even before insomnia begins, I mind the contact of people's eyes. I mind some people's eyes a great deal more than others, and some eyes I do not mind at all. Children I never mind at all; they never annoy me in any way. You spoke of bereavement, trouble, etc. I have not the kind of nature that broods over such things, or over anything that is fixed and decided. Suspense, doubt, uncertainty—such things come and go, I suppose, in all lives—wear upon me, but I cannot trace any of these attacks directly to anything of the sort, except perhaps once when an attack was brought on out of its regular course, that is, only a few months after the recovery from a former one, by something of that nature. I am never worried about myself, that is physically about my health, I mean. I analyze myself and pull myself to pieces, not exactly in a dispassionate way, but at least without any anxiety as to the future, or to the present either, for that matter. I should think that this putting myself down upon paper were bad for me; my brain is so restless and teeming with thought this Sunday morning, if I did not know from long experience that if it were not full of this, which is very fascinating work, it would be full of something else. I slept well last night and waked up in a perfectly natural and healthful manner, that is, with an inclination to turn over and so go to sleep again, and I think, perhaps, I ought to have yielded to that inclination, but on Sunday morning I am in the habit of going to an

early service, at half past seven, in a church about a mile from our house. Would it be better for me to give up going to it for the present? I did during my last attack, but it seemed to make little difference. The little argument with myself as to whether I should get up this morning or not of course waked me beyond the power of going to sleep again, and I satisfied myself by thinking that I would sleep an hour or two later in the day, but I am as far as possible from sleep now, and probably shall be all day. I cannot tell how it will be to-night.

"I have asked my aunt (my father's sister, who took my mother's place in the family when she died) if she could remember any decided beginning of these attacks. She says that she thinks they date from my return from boarding-school when I was sixteen years old. She says that I was a perfectly healthy child, of exhaustless energy, 'dreadfully energetic,' as she expresses it, brimming over with plans (generally mischievous), which I always carried out, not only rapidly, but daringly and unscrupulously, leading all the other children after me and making no end of trouble for everybody. She said it was with many misgivings that she allowed my relatives to send me to a boarding-school; it seemed to her that restraint and confinement would kill a child so active and fond of the freedom of an outdoor life. It was just after my fourteenth birthday that I was sent away. The menses began about six months after, and when I had been there nearly two years I had something which our home physician thought (she says) must have been diphtheria. My own recollection of it is that I went up to the matron's room with half a dozen girls who were having their throats examined, and just for fun I opened my mouth and suggested merrily that she had better look at mine too. She looked and told me gravely to go at once to the nursery. I cannot remember whether I was kept apart from the other girls. If it had been for any length of time, for a week even, I think I should be able to recall it. All that I can remember is that I was kept away from the schoolroom in the nursery for several weeks; that the matron (toward the end) used to touch my palate constantly with alum, that the physician used to look at it, I suppose, daily, and sometimes made an application. I remember hearing him say once that there was honey in something he applied, and once he said to the matron that the inflammation had gone back to the nostrils, and I can remember that what seemed to me like pieces of flesh about the size of a pea used to come out through my nostrils. My aunt says that I came home for my vacation soon after that, seemingly very much broken down in health, full of morbid whims and not at all like myself. I went back again for a few months and then came home again with chills and fever. I don't remember how long they lasted, or much about myself at that time, but my aunt says I have never seemed well since, although she cannot date the beginning of these periodic attacks.

"I think I can give an illustration that will make you understand a little better these premonitory symptoms. I am used to spending about an hour every morning in my private devotions, going through a regular formula, which consists principally of the morning service of the Prayer-book. It takes the clergyman a little more than half an hour to go through with it; it takes me somewhat longer at all times, because of wandering thoughts, going back to repeat over again things that I have said mechanically, etc., which proves that there is a want of power of concentration at all times. But before the beginning of these attacks, at least before insomnia begins, my efforts to fix my thoughts in prayer become an all-day's battle with myself until bedtime comes before I have got through (and not at all satisfactorily then) with what ought not to take an hour. After the insomnia sets in I am obliged to give up prayer in anything but a desultory and irregular way. Altogether I think my brains kick more decidedly against that than against anything else.

"Loss of flesh.

"Missionary work.

"Restlessness.

"I have just been asking my aunt how these attacks appear to her. She says they seem to change my whole nature; that I am the very opposite to myself; that, whereas I am naturally bright and smiling, taking life easily and comfortably, through these attacks I never smile at all, and seem to be filled with sorrow and anxiety about the most trifling things, and am eternally drawing my brows, always preoccupied, generally very silent, but very restless, always pacing up and down, or moving about in a distracted sort of way, as if I were looking for some indefinite thing.

"*Second Stage—Depression.* About the depression that comes with the reaction. If I could have believed that it were possible to put myself asleep and never wake again in any state of being, I think I should have committed suicide long ago; but I have never been able to believe it for a moment, and so have never seriously contemplated anything of the kind. I have only taken a morbid satisfaction in dwelling upon the subject. The depression has rather taken the form of praying earnestly, in an agony, for death; of always lying down at night with a longing that I might never wake again; of earnestly hoping, whenever I got on a railroad train, that there might be an accident which would kill me, etc. I pace up and down a room wringing my hands in an agony of—I don't know what; I don't know in the least what I am unhappy about; at the very moment I could not tell myself, much less any one else. It is not a fear of hell or anything of that sort, because, to begin with, I don't believe in eternal punishment, and besides it is not in any sense what I should call a religious depression. There is a feeling of being forsaken by God, which does not, however, enter into it largely. It does not make the least difference what I do, I always feel as if it were the wrong thing, and that I ought to be doing something else. In describing it, it seems as if there were very little in it, at least as if it would seem very little to any one else; yet it is very *real* suffering to me. I cannot talk about it to any one, and as never smiling is a part of this stage of the disease, my family always fancy that I am unhappy throughout the whole, and see very little difference in me in the two stages, which are as unlike as possible to me. Action and reaction express it perfectly. I am worried, without being in the least depressed, all through the sleepless part, and worried—passively worried—and depressed through all the rest. There is a great deal of absent-mindedness during the first part, which does not characterize the second, at least not to any extent. There is a good deal of that sort of thing about me at any time, but it is very much exaggerated during the sleeplessness. I find myself in some remote part of the house without having the least idea of how I got there. I have set a table for dinner perfectly, and then have left the room, and five minutes after have looked in at the dining-room door and wondered who has set it.

(*Natural trance.*) At another time, when my mind has been present, it has been only with the greatest effort that I could remember or count up the number of knives and forks, etc., required. It seems to me that, instead of being changed and totally opposite from myself, as people think, that it is only that every trait of character is very much exaggerated. I am very fond of reading. Books are my only friends and companions, but after the first five or six weeks gradually I cannot fix my thoughts on any book, even if read out loud. I carry on a separate train of thought. There is never very much temptation to talk about myself to the people who live in the house with me. I grow into such aversion toward them that I cannot bear to say anything more to them than is absolutely necessary. They never dare to ask how I have slept or how I feel, or to take any notice of me, which is rather a difficult thing, when I seem so unlike myself. I think they suffer more than I in the first stage. But to outsiders — people whom I don't see often — I have always to fight against the desire to talk about myself."

The patient who prepared the above psychological analysis of her experience has yet other peculiarities. She morbidly dislikes, and has always disliked, to shake hands with or to kiss any one. This dislike, which is a part of her organization, applies to both sexes and all ages. It is painful, or at least very disagreeable, to feel the touch of the lips of any one against her own. She is a maiden, and of course can never marry. All through, her organization is of the finest type. The attacks of *natural trance* are very interesting.

Under various treatment, the state of insomnia with exaltation, for which she consulted me, has been, to all appearance, broken up, so that she sleeps well and is in all respects far better than in any previous attack. Indeed, I have never seen a case so long standing and so severe yield so rapidly to therapeutical procedures.

Acquired Monorchidism.—Dr. A. C. Graham, of Dallas, Texas, writes: "Operating for fistula in ano, I obtained from the patient the following history: W. C. W——, thirty-six years of age, married, father of four children. When fourteen years of age, he attempted to climb over a fence with a sack of wheat on his shoulder; his foot slipping, the right testicle was caught and squeezed between the top board and his body. He suffered intense pain in the injured organ at the time, but did not notice till the next day that the scrotum contained but one testicle, the right being felt much enlarged a little below the external abdominal ring.

"He assures me with much emphasis (and being an intelligent person I have no reason to doubt the correctness of his statement) that before he met with this accident both testicles were well down in the scrotum, the left hanging a little lower than the right. At present examination the latter is small, about the size of an almond, lies over the external ring, but can easily be pushed along Poupart's ligament a distance of two inches or more. It never gave him any trouble till last October; since then, at times, it swells and becomes painful. In Holmes' 'System of Surgery' a case is reported in which the right testicle during masturbation was drawn up into the inguinal canal. Van Buren, in his work on 'Genito-Urinary Diseases,' mentions the same case."

THE TREATMENT OF HEMORRHOIDS BY THE DILATATION OF THE ANAL SPHINCTERS.

By WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.

The treatment of hemorrhoids by the dilatation of the sphincters of the anus, whether gradual, instantaneous, or forcible, is founded upon the theory that the involuntary contraction of one or both of these sphincters is an exciting or an efficient cause of the hemorrhoidal disease, or that it, at least, exerts great influence in its production and continuance; consequently that the dilatation of the anal sphincters is a rational method of cure, doubtless upon the principle that by the removal of the cause the effect itself will cease. But the effect of a certain cause sometimes becomes itself a disease, and exists independently of the cause or disease which first produced it; so that the removal of the original cause in such a case will not remove the original effect, which has now itself become an independent entity. With regard to the hemorrhoidal affection, when accompanied by regular organized tumors, if caused by involuntary contraction of the sphincter ani, I hold that the removal of the contraction alone will not remove the tumors, one of the original effects of it. Indeed, if ever hemorrhoids are caused by involuntary contraction of the anal sphincters, dilatation of these muscles can only act efficiently as a therapeutic remedy in the early stage of the disease, before extravasation of the contents of the turgid vessels into the cellular tissue has taken place and before organized tumors have formed. It will be shown hereafter that even the most zealous advocates of forcible dilatation of the anal sphincters do not rely upon this remedy alone as a cure of hemorrhoids, when organized tumors exist, but combine with it cauterization by the galvano-cautery or by some other process. In such a case, if any cure at all is effected, it is the result solely of the cauterization, and not of the dilatation. Why, then, combine the two methods? I would observe, however, that it is the practice of some surgeons, in case of hemorrhoids, to employ forcible dilatation or rupture of the anal sphincters, not as a therapeutic, but merely as a diagnostic measure, to enable them the better to explore with greater ease the seat of the affection, and to operate with greater facility.

I would here remark that the generic term, *forcible dilatation*, coined by French surgeons, includes two or three methods of dilatation, which differ essentially from each other, both with regard to the *modus operandi*, and the amount of force to be used; hence the meaning of the term is understood and explained differently by different French authors. Some declare that the dilating force should be carried to the extent of forcibly rupturing or lacerating the sphincters; while others, again, declare that the dilating force should be limited to a point short of any injury whatever to the dilatable parts, knowing that when the limits of the dilatability of the anal sphincters is reached, any further expansion is gained only at the expense of the continuity of the membranes and muscular fibres. The term *forcible dilatation*, then, is not specifical enough in either case, inasmuch as it does not indicate how much or how little force should be employed in the process of dilatation. I would therefore suggest to those who explain the term to mean the rupture of the muscles, to employ the word *overstrain* the anal sphincters, in-

stead of the term *forcible dilatation* of them. The word *overstrain* would indicate the amount of force required to produce what they call *forcible dilatation*. With these few prefatory remarks, I will now proceed to give a brief history of the dilatation of the anal sphincters, both gradual and instantaneous or forcible; their *modus operandi;* the anatomy and physiology of the sphincters ani, upon which the operation is performed; the effect upon these muscles by the operation, together with the involuntary contraction of them, as an efficient cause of hemorrhoids.

Gradual dilatation.—The treatment of hemorrhoids by the dilatation of the anus and anal canal, by means of bougies gradually increased in size, was practised many years before instantaneous or forcible dilatation was thought of for the same purpose. The bougie as an efficacious local remedy in diseases of the canal and orifice of the anus was employed a century ago in Italy. Palletta thus briefly alludes to its use: "Ma piu direttamente opereranno i locali remedii introdotti nell' ano: tra quali trovai prontamente efficace una candeletta di cera spalmata di burro impastato con molta polvere di galladi quercia" ("Instituzione Chirurgiche di Monteggia," parte tezza, sezione seconda, p. 521. 8vo. Melano, 1805).

In our own country, I find that compression and dilatation were successfully practised for the cure of hemorrhoids by a physician of the State of Maryland in 1801 ("The Medical Depository," 2d Hexade, vol. 1, p. 339. 8vo. New York, 1804).

Mr. Copeland, of London, previous to 1810 successfully employed dilatation of the anus and anal canal by means of bougies in the treatment of numerous cases of hemorrhoids. He highly recommended the practice ("Observations on the Principal Diseases of the Rectum and Anus," p. 67. Second edition, 8vo. London. 1814).

Mr. Quain also speaks in high terms of the use of dilatation of the anal canal by means of bougies in certain cases of hemorrhoids ("The Diseases of the Rectum," p. 18. Second edition, 12mo. New York, 1855).

I have for a number of years employed dilatation of the anus and anal canal by the use of bougies for the treatment of the incipient stage of the hemorrhoidal disease, with good results. If judiciously employed at an early stage, before organized tumors have formed, it may prove the means of destroying the morbid condition of the vessels, and overcoming any undue contraction of the anal sphincters, and thus preventing the further progress of the disease. The influence of the bougie in removing the morbid sensibility, and in relaxing the rigidity of the sphincters, as well as facilitating the return of the blood from the turgid, congested, and varicose vessels, is often surprising; and if torpor of the rectum and obstinate constipation obtain, which are not unusual in such cases, it soon induces a natural action of the bowels, an object so very desirable in such instances.

Instantaneous or forcible dilatation.—It is known that more than half a century ago the able and distinguished French surgeon, M. le Baron Boyer, maintained the theory that in what he called *anal fissure*, the spasmodic or involuntary contraction of the sphincter ani, was the primary as well as the principal morbid condition. He considered the spasmodic or arbitrary contraction of the anal sphincter to be the real substantive disease itself, while the lesion of the mucous membrane, if existent, to be the mere result or effect of it; so that whenever the two affections coexisted, they stood in the relation of cause and effect. His treatment therefore corresponded with his theory, that is, he practised and advised the complete division of the anal sphincter, for the cure not only of the spasmodic contraction of the muscle, but for the cure of the fissure also (*Journal Complémentaire du Dictionnaire des Sciences Médicales*, tome ii., p. 24. 8vo. Paris, 1818; "Traité des Maladies Chirurgicales." Cinquiéme edition, tome vi., p. 605. 8vo. Paris, 1849).

Some considerable time after the introduction of M. Boyer's operation for anal constriction and fissure, it was generally laid aside by French surgeons, and forcible dilatation of the anal sphincters was gradually substituted for it. The commencement of this radical change was principally brought about by the able and ingenious M. Récamier, of the Hôtel Dieu of Paris, who was the first French surgeon to apply extension, distention, and massage in the treatment of the morbid contractions of muscles. He thoroughly investigated this subject in a very able and valuable article, published in the *Revue Médicale de Paris*, January, 1838. In this production M. Récamier speaks of having, for the first time in anal fissure, employed, instead of Boyer's operation, massage or kneading upon the anal sphincters, in order to lessen the force of the spasmodic muscular contraction which obtains in that disease, and which he considered to be the real cause of the suffering. He also employed dilatation of the anal sphincters by the use of bougies, gradually increased in size. A lady consulted him who had long suffered severely from a fissure of the anus, for which M. Boyer had divided the anal sphincters. The operation did not prevent a relapse, and the patient continued to suffer dreadful pain in the rectum, especially when stooling. M. Récamier employed dilatations of the anal sphincters, and inferior portion of the rectum, by means of bougies, and ultimately succeeded in effecting a perfect cure in this interesting case. He reports several other cases of anal fissure, which were complicated with hemorrhoids, in which the same treatment was speedily followed by complete recovery.

It is very evident from the observations of M. Récamier, that he did not contemplate, by either gradual, instantaneous, or forcible dilatation of the anal sphincters, any rupture of the muscular fibres, or any laceration or tearing of the mucous membrane of the rectum, as some authors have attributed to him. M. Monod, when discussing the subject of the forcible dilatation of the anal sphincters in anal fissure, and after explaining what he considered the *modus operandi* of M. Récamier's process to be, says that "in it there occurs no rent of the mucous membrane, nor rupture of the fibres of the sphincters, but simply a modification, or a sudden change in the nervous state of the muscles, from which a momentary paralysis results, followed by the return again to the normal state" ("De la Dilatation Forcée comme moyen de Traitément de la Fissure de l'Anus avec Constriction du Sphincter." 8vo. Paris, 1849). About a quarter of a century subsequent to the introduction of M. Récamier's process of anal dilatation, which, by the bye, never met with any favorable reception, M. Maisonneuve, the able successor of M. Récamier, at the Hôtel Dieu, revived, as it were, this long-neglected method of his predecessor, by making a striking change in its *modus operandi*. Instead of dilating the anal

sphincters by means of bougies, or rapidly dilating them by means of the fingers, as practised by M. Récamier, he conceived the very original and unique idea of instantaneous or forcible dilatation of the anal sphincters. This he effected by gradually insinuating his right hand, finger by finger, into the anus, and up into the *ampoule rectale*, then firmly clenching it, and forcibly withdrawing the fist; thus producing instantaneous and forcible dilatation of the anus and anal canal, and of course, inflicting more or less injury upon the mucous and muscular tissues of the same. This repulsive proceeding of M. Maisonneuve, before chloroform was introduced, met with no favor whatever, and was soon consigned to oblivion. He, however, some years subsequently, greatly modified it, as I will now proceed to show. M. Maisonneuve in 1851 maintained the theory that involuntary contraction of the anal sphincters, besides being a cause of anal fissure, was also a frequent cause of hemorrhoids. He believed that in almost all cases of hemorrhoids this morbid contraction played a most conspicuous and painful part in their production; hence, his remedy *par excellence* was forcible dilatation of the anal sphincters, by means of the two thumbs, or the two index fingers, instead of the fist. He was the first surgeon, so far as my reading extends, who practised and recommended forcible dilatation of the anal sphincters, as a therapeutic remedy in hemorrhoids (*Clinique Chirurgicale*, tome ii., 8vo. Paris, 1864).

M. Lepelletier, the friend and *interne* of M. Maisonneuve, in a most remarkably able thesis on this subject reports a number of cases of hemorrhoids which M. Maisonneuve had successfully treated by forcible dilatation of the sphincter ani ("De la Contracture du Sphincter Anal, et de son Traitement par la Dilatation Forcée." Thèse de Paris, 1851).

M. Verneuil, the present able and distinguished French surgeon, after discarding, like many of his French *confrères*, the usually accepted theory of the etiology of the hemorrhoidal disease, as being entirely too inadequate to assign the true origin and cause of the varicose enlargements of the hemorrhoidal vessels, proceeded to devote his attention to a diligent search for the true predisposing cause of that affection in the anatomy and physiology of the rectum itself. He declares he has discovered the true and only predisposing cause of hemorrhoids in the peculiar distribution of the hemorrhoidal veins, and the course they pursue in the coats of the rectum, a few inches above the anal orifice; and to this predisposing cause, together with involuntary muscular contraction, he attributes all the varicose enlargements which take place in the hemorrhoidal veins. According to M. Verneuil, then, the true predisposing cause and the efficient cause of all hemorrhoids are solely founded in the anatomical structure and physiological action of the rectum, as he has demonstrated by dissection. He embodied his views upon the subject of these causes, especially that of involuntary muscular contraction, in the pathogeny of hemorrhoids, in an able production, which he communicated to the Anatomical Society of Paris in 1855.

M. Verneuil maintains that the superior hemorrhoidal veins are only in connection with the portal system, and form only internal hemorrhoids, while external hemorrhoids are formed from the middle and inferior hemorrhoidal veins, which are connected with the general venous system, and do not, except perhaps in the most remote degree, form connections with the superior hemorrhoidal veins, thus, in effect, cutting off all communication between the portal and general venous systems. He further maintains that the superior hemorrhoidal veins commence at the superior border of the external sphincter ani, and lie under the mucous membrane of the rectum, and at the height of ten or eleven centimetres abruptly perforate, as it were, the muscular coat of the rectum. At this particular point of the canal M. Verneuil claims to have discovered that these veins pass abruptly through veritable buttonhole apertures in the muscular coat, and in consequence of these muscular apertures not being invested by any protective fibrous tissue, have the power of contracting, and thus causing such congestion and stasis in the superior hemorrhoidal veins which pass through them, as to constitute the primary cause in the formation of internal hemorrhoids. These contractile apertures, says M. Verneuil, constitute not only the passive, but also the active cause of hemorrhoids. Any intestinal irritation will produce violent and spasmodic contractions of the muscular apertures, and these contractions are communicated to the levator and sphincter ani muscles, and a rapid development of internal hemorrhoids is the consequence. M. Verneuil founded his peculiar views of the etiology of hemorrhoids upon his own and the dissections of MM. Gosselin in 1864, Dubreuil and Richard in 1868, and Duret in 1877. Hence, upon this plausible theory, as demonstrated by the dissections of his own, and those of his able coadjutors, he established his favorite treatment of hemorrhoids by the forcible dilatation of the anus ("Du Traitement des Hemorroides par la Dilatation Forcée de l'Anus." 8vo. Paris, 1879).

The theory deduced from these important and valuable rectal dissections is a very ingenious and plausible one, yet not altogether an entirely new one, as I will attempt to show; nor is it any less specious than that on the same subject, advocated more than a century ago by many of the old surgeons. Soon after the illustrious Harvey had demonstrated the circulation of the blood, great importance was attached to the supposition entertained by some surgeons of that epoch that internal hemorrhoids were in immediate communication with the splenic and great mesenteric branches of the vena porta, and that they alone depended upon this source for their origin, existence, and growth, while the external hemorrhoids were alone the result and production of the dilatation and engorgement of the terminating hypogastric branches of the vena cava. This theory finally attracted the attention of the celebrated De Haen of the eighteenth century, who established upon it the following axioms: namely, that hemorrhage from the external hemorrhoidal vessels directly and promptly depleted the sanguineous system in general; while, on the contrary, bleeding from the internal hemorrhoidal vessels directly and promptly disgorged the vena portal system. De Haen says: "Fluxu hemorrhoïdum externarum fit directa, cita ac generalis totius systematis vasorum (præter systema venæ-portæ quod tunc et lentius, et parcius depletur), depletio, id est imminutio plethoræ universalis. Et contrâ fluxu hemorrhoïdum internarum fit directa, cita et copiosa depletio systematis venæ-portæ; lenta vero, ac parca totius reliqui systematis vasorum; ut proindè hoc fluxu, plethora totius non a deò imminuatur" ("Thèse Pathologicæ de Hæmorrhoïdibus," cap. i., sec. 3. 8vo. Vindobonæ, 1759). Alberti maintained that the internal hemorrhoidal veins were

derived from the inferior mesenteric, while the external hemorrhoidal veins were branches of the hypogastric ("Tractatus de Hæmorrhoïdibus," cap. v., p. 74. 4to. Hake, 1722). M. Gosselin declares that internal hemorrhoids are due to varices of the superior hemorrhoidal veins, whilst external hemorrhoids are formed by the inferior hemorrhoidal veins ("Leçons sur les Hémorroïdes." Paris, 1866).

The plausible theories of these several distinguished authors, however, cannot well be considered in any other light than that of a more or less fanciful character. Indeed, in my opinion, they cannot be satisfactorily demonstrated, either by dissection or experiment, in consequence of the insuperable barrier presented by the interminable intersecting, interlacing, and the innumerable anastomosing of all the hemorrhoidal blood-vessels which abound as an intricate plexus in the middle and inferior portions of the rectum. It therefore seems to me that as yet it still forms, as it were, a complete Chinese puzzle to determine positively what particular hemorrhoidal blood-vessels produce either internal or external hemorrhoids, or what particular hemorrhoidal blood-vessels deplete the system in general, or the vena portal system in particular.

The proceeding of M. Verneuil.—M. Verneuil was one among the ablest advocates for the treatment of hemorrhoids by the forcible dilatation of the anus; but, in order to success, he was compelled, in the majority of cases, to combine with it the galvanocaustic method. The proceeding of Verneuil, in certain cases, comprises two distinct processes: first, the anal dilatation; and second, the interstitial cauterization of the tumors. I am, however, only required to give his first process. On the evening of the day previous to the operation, M. Verneuil requires the patient to take a purgative, and on the next day, just before the operation, an enema is to be administered. After the rectum is completely emptied by these means, the patient should be put under the influence of an anæsthetic, and placed on his left side, in the position required for the operation of fistula in ano, and a bivalve speculum introduced into the rectum fully up to the superior border of the internal sphincter ani; then the blades, forcibly opened, should be slowly withdrawn from the rectum. Afterward two fingers of each hand may be introduced into the anus, and forcibly stretching the external sphincter, by which its dilatation will also be the more thoroughly effected. The patient is now put to bed, and compresses, dipped in cold water, are to be constantly kept applied to the anus.

According to M. Verneuil, this operation is done in a minute, and does not give place to any serious complications. There is no fear of hemorrhage nor of purulent infection, nor contraction of the rectum. The pain that follows the operation is not severe, and only lasts for a few hours. For two or three days the dilated sphincter does not completely close the anal orifice, and allows the mucous membrane to protrude at the anus in the form of a hernia; the sphincter, however, gradually regains its contractile power, and at the end of five or six days, it has again resumed its normal form and activity, and the patient is completely cured (*op. cit.*).

M. Duret, a former *interne* of M. Verneuil, also very ably investigates this subject by plainly showing the manner in which the involuntary contraction of the anal sphincters acts in the production of hemorrhoids ("Sur la Pathogénie des Hémorroïdes" in Mémoire pour le Concours de la Médaille d'Or).

According to the testimony of M. Lartisien, M. Verneuil for several years employed forcible dilatation of the anal sphincters, combined with the galvano-cautery, in the treatment of hemorrhoids. ("Du Traité des Hémorroïdes, et de la Cauterisation intersti, en particulier." Thèse de Paris, 1873).

M. Gosselin also employed forcible dilatation of the anal sphincters in the treatment of hemorrhoids. The cases, however, in which he used it, were, it seems, complicated with anal fissure; and it was doubtless more for the cure of the fissure than for the cure of the hemorrhoids that he employed it (*op. cit.*).

Hemorrhoids and anal fissure are two affections which often coexist, and the theory of the French surgeons is, that when such is the case forcible dilatation of the anal sphincters cures both diseases. I have shown, however, that their theory and their practice do not correspond. M. Fontan, a distinguished French surgeon of Lyons, commenced treating hemorrhoids in 1875 by the forcible dilatation alone of the anal sphincters, by means of the fingers, carefully guarding against any injury to the dilatable parts. To this mild operation of M. Fontan, which will prove just as effectual as the rupture of the anal sphincters, no valid objection can be urged. It is the same operation which I myself practised and recommended previous to 1868, in certain cases of anal fissure; the patient always being first placed under profound anæsthesia; for the anal sphincters, in consequence of their functional activity in such cases, are, as a general rule, the last to relax or yield to the influence of anæsthetics. I then said, "Instead of the thumbs, I introduce into the anus the index finger of each hand, and forcibly dilate the contracted muscles, first antero-posteriorly and then laterally, at the same time taking care to preserve the integrity of the membranes" ("Anal Fissure," p. 135. Imp. 8vo. New York, 1868).

M. Fontan, in his valuable productions on this subject, refuses to give credit to either M. Maisonneuve or to M. Lepelletier for priority in the suggestion or the employment of forcible dilatation of the anal sphincters as an especial and rational treatment for hemorrhoids. He says that this is a pending question (*Moniteur Thérapeutique de Paris*, Novembre, 1875; "Du Traitement des Hémorroïdes par la Dilatation Forcée des Sphincters de l'Anus" 8vo. Paris, 1877).

M. Cristofari, a recent French author on this subject, employs forcible dilatation of the anal sphincters in the treatment of hemorrhoids, and he very forcibly advocates this fashionable French method ("Du Traitement Chirurgical des Hémorroïdes, et en particulier de la Dilatation Forcée." 8vo. Paris, 1876).

(To be continued.)

An Insane Asylum Investigated.—A number of charges having been brought against the Superintendent and other officers of the West Virginia State Asylum, at Weston, a Legislative Committee was appointed to investigate the matter. It was found that two of the directors and the first assistant physician, Dr. Hullihen, had been guilty of drunkenness as charged. The removal of Dr. Hullihen was recommended. The charges against the Superintendent, Dr. Bland, of neglect, extravagance, and mismanagement, were entirely unsupported. The Committee found that the Asylum, originally intended for two hundred and fifty patients, was crowded with six hundred.

Reports of Hospitals.

ST. FRANCIS HOSPITAL, N. Y.

SERVICE OF DR. GEORGE F. SHRADY.

LATERAL LITHOTOMY—MULBERRY CALCULUS—RECOVERY.

THE patient, aged nineteen, had suffered from symptoms of stone for several months, but had been treated by irregular practitioners for simple "inflammation of the bladder." Finally he consulted Dr. Alex. Hadden, who at once verified the suspicion of the existence of stone, and sent him to Dr. Shrady for operation.

On sounding, the diagnosis was made of a hard irregular-shaped calculus, of about one inch and a half in diameter, On account of the extreme irritability of the bladder, aggravated by a recent attack of urethritis, the intolerance of instruments, the size and character of the stone, and the small calibre of the urethra, the operation of lateral lithotomy was decided upon, in preference to crushing, which, under other circumstances would have been indicated.

The operation was performed April 22d, at St. Francis Hospital, with the assistance of Profs. Howe and Bryant. The stone, on being reached by the finger, was found to have an exceedingly rough surface, and resembled a lump of cinder more than anything else. It was readily seized with the forceps, but before extraction could be safely effected it was necessary to incise the right lobe of the prostate.

The stone, which was of the mulberry variety, weighed two hundred and eighty grains, was oblong in shape, measuring one and five-eighths inch in one diameter and one inch in the other; presented over its surface large and widely separated dark brown tuberculated projections (oxalate of lime), imbedded in a white crystalline base (phosphate of lime), was of flinty hardness, and showed more than the usual irregularity of surface.

The patient has progressed toward recovery without a bad symptom, the wound has nearly healed, and the major part of the urine is voided through the penis.

TRACHEOTOMY FOR SYPHILITIC DISEASE OF LARYNX.

A male patient, thirty three years of age, was sent by Dr. W. C. Jarvis, with the diagnosis of syphilitic growth on the left side of larynx involving left vocal cord. There was such extreme difficulty of breathing, the man seemed liable to become asphyxiated at any moment. He had been getting gradually worse for three weeks before, and in desperation begged that he be relieved by tracheotomy. The operation was performed by Dr. Shrady with the least possible delay, in the presence of and with the assistance of Drs. Ripley and Satterthwaite. Relief was immediate. After the wound had been closed in the usual way above and below the tube, the patient was seized with a severe fit of vomiting and a prolonged paroxysm of coughing. During the latter act the tube was ejected from the trachea, and emphysema of the head and neck quickly followed. The stitches were promptly removed and the edges of the tracheal wound held apart. A longer tube was then introduced, and the incision in the integument was left open. In the course of the next forty-eight hours the emphysema had disappeared, but the tissues about the wound had become much infiltrated. The latter condition increased until the fourth day, when it was impossible on account of the relatively deep condition of the tracheal opening to keep the tube in place. During the five days following, when a longer tube was being made, the tracheal wound was simply kept open by the occasional introduction of a dilator. Respiration and expectoration were carried on through the aperture without the slightest inconvenience. The larger silver tube has been worn for the past two weeks with comfort. The laryngeal growth, which is irregular and warty in character, is apparently decreasing under anti-syphilitic treatment.

PERINEAL SECTION FOR TRAUMATIC STRICTURE.

This was the case of a laborer who fell astride a beam, had bloody urine for three weeks, and finally, at the end of a month longer, almost total inability to pass his water. The stricture was situated at the bulbo-membranous portion of the urethra, where there existed for an inch in extent an irregular tract of cicatricial tissue of cartilaginous firmness. The obstruction was practically impassable; even after etherization it was impossible to engage the finest filiform. Urethrotomy was performed without a guide. The strictured portion of the urethra was found deflected sharply to the right, and after considerable search an opening only large enough to admit a probe was found leading to the bladder. The stricture was then freely divided in the usual manner.

IODOFORM AS A DRESSING.

Iodoform has been used quite extensively as a local dressing for indolent granulating surfaces, and in the main has given good results. It is not employed at present as a dressing for freshly made stumps and recent wounds.

THE INTERNAL ADMINISTRATION OF CARBOLIC ACID.

In several cases in which an internal antiseptic seemed to be indicated, and notably in such as were the subjects of profuse suppuration with attendant constitutional disturbances, Dr. Shrady has used the acid phenique (carbolic acid) internally and hypodermically, according to the method of Dr. Déclat of Paris with quite satisfactory results. He has employed mostly the syr. iodo-phenique (Déclat) and the nascent acid phenique (Déclat). The former in doses of a teaspoonful every two hours, and the latter in quantities of eighty minims injected daily in the cellular tissue of the abdominal walls. In two cases the good effects were quite striking. One was a woman worn down by suppurating disorganization of the knee-joint, and who had irregular chills and high temperature and other symptoms pointing toward septic infection. The thigh was amputated under the most unfavorable conditions, general and local, with hardly a hope for ultimate recovery, and after the first forty-eight hours all the bad symptoms disappeared under the administration of the syr. iodo-phenique and the patient ultimately left the hospital cured.

The other case was one of long-continued and extensive suppuration from an open and burrowing iliac abscess. The patient has been bedridden for months, and altogether was in a prostrated and helpless condition. In the course of two weeks under antiseptic treatment, internally and hypodermically, his general condition improved, his appetite returned, and the discharge became very much reduced. At the end of six weeks he is able to hobble about the ward, the sinuses are healing, and the amount of pus secreted has been reduced from a pint to scarcely half an ounce.

Progress of Medical Science.

The Use of Nitrous Oxide Gas in Labor.—Dr. Klikowitsch (*Meditz. Obozrenie*, xv., p. 759) has used this gas instead of chloroform in twenty cases of labor. He considers it much superior to chloroform or ether. Four to five inhalations are sufficient to abolish sensation without affecting consciousness, and its use is free from the objectionable after-effects peculiar to the above-named anæsthetics. It is said that the inhalation can be carried out under the direction of an intelligent nurse, so that the interposition of the physician is not absolutely necessary.

The Genesis of Certain Hereditary Deformities.—Dr. Sigfred Levy has investigated the hypothesis that strong pressure on the walls of the uterus may cause certain deformities in the fœtus.

He first examined the conditions existing in twenty-one cases of hereditary talipes, and, by questioning the mothers on the course of the pregnancy and parturition, found indications in seven cases, or thirty-three per cent., that there was but a small quantity of liquor amnii.

He then inquired into Prof. Roser's theory of congenital luxation, which was, that when there is too small a space for the fœtus in consequence of a deficiency of liquor amnii, the result will be, in the female fœtus, congenital luxation, but in the male, talipes. In eighteen cases of congenital luxation the author found but three males, while in congenital pes varus there were but 22⅔ per cent. females.

As patients with congenital luxation usually apply for treatment at a late period, information as to the course of the pregnancy and parturition is thought to be untrustworthy.

Among other deformities, the author mentions a case of congenital defect of the left radius and of the fibula. In both there had been a constant loss of liquor amnii during pregnancy.—*Ugeskrift for Laeger and Nordiskt Medicinskt Arkir*, Bd. xiii., No. 29.

Condition of the Cutaneous Nerves in Locomotor Ataxia.—M. Déjérnie recently announced to the Paris Société de Biologie that the pathological condition presented by the cutaneous sensory nerves, in ataxic patients, is, essentially, a peripheral neuritis. This statement M. Déjérnie bases upon the fact that, in a case recently observed by himself, the spinal ganglia and the posterior roots below the latter were perfectly normal in appearance, while the cutaneous nerves were the seat of a neuritis.—*Progrès Médical*, March 25, 1882.

Inoculation as a Prophylactic Measure against Malignant Pustule.—In a communication to the Paris Académie des Sciences, M. E. Corson recently described a case of malignant pustule, occurring in the person of a man who had experienced one attack of that disease twenty-seven years before. The symptoms were of a very grave character, embracing severe febrile phenomena and deep coma, which persisted for more than twenty-four hours. The patient, however, made a rapid recovery and, at the end of a few days, bore no marks of the disease except two ulcerations upon the back of the hand. M. Corson advances the theory that the rapid recovery of the patient may have been due to the possible modifying effect exerted by the former upon the latter attack.—*France Médicale*, March 25, 1882.

Increase of Hæmoglobine in the Blood of Animals Inhabiting Elevated Regions.—*Le Courrier Médical*, April 1, 1882, gives a *résumé* of the results of M. P. Bert's recent experimental investigation regarding the comparative quantities of hæmoglobine in the blood of animals residing at different altitudes. Men and animals, when suddenly removed to regions six thousand feet above the sea, experience certain well known symptoms, collectively designated, in the Alps, *le mal des montagnes*. Dr. Jourdanet long since advanced an opinion that the morbid condition is referable to a diminution in the quantity of oxygen in the blood and suggested for it the designation *anoxyhæmia*. M. Bert's experiments, recently reported to the Paris Académie des Sciences, seem to prove the accuracy of this theory and to show that the percentage of oxygen in the blood diminishes in direct ratio to the reduction of atmospheric pressure. Prolonged residence on the mountains secures immunity from the unpleasant symptoms alluded to, but the phenomena of anoxyhæmia show themselves even in the acclimated, whenever the latter suffer from any acute disease. M. Bert maintains that the acclimation in question is due to an increase in the hæmoglobine of the blood, basing his hypothesis upon the determination of the percentage composition of blood taken from animals resident at different altitudes. While the blood of animals living at ordinary elevations absorbed only ten or twelve per cent. of oxygen, that of others which had been transported to an altitude of about ten thousand feet above the sea was capable of absorbing from sixteen to twenty-one per cent.

Treatment of Irreducible and Strangulated Hernias by Morphia Hypodermically Administered.—*Le Gazette des Hôpitaux*, March 25, 1882, presents a summary of the results obtained by Dr. Philippe in the treatment of five cases of irreducible or strangulated hernia by means of hypodermic injections of morphia, and concludes that this method constitutes a potential expedient to which the surgeon should resort before adopting operative measures. Dr. Philippe's first case was one of double irreducible inguinal hernia. Taxis was first employed, for a quarter of an hour, without result. Five drops of a morphia solution, containing about nine and one-half grains to the ounce, was then injected, hypodermically, after which the volume and the tenderness of the hernial tumor diminished. Fifteen minutes later another injection, of five drops, was administered, and the reduction of the hernia was easily effected. The other cases only differed from the first, as regards treatment, in the amount of morphia used. One of the cases was an umbilical hernia, one was a strangulated femoral, and another a strangulated inguinal hernia. Reduction was easily effected, in all the cases, after the employment of from two to six injections.

Cerebral Sclerosis in Children.—M. Jules Simon describes, in the *Gazette des Hôpitaux*, March 21, 1882, the pathology and clinical history of infantile cerebral sclerosis, as studied by himself at the Hôpital des Enfants-Malades. The sclerosis is more frequently superficial than deep, and affects, by preference, those parts of the cerebrum adjacent to the fissure of Rolando. It occurs in isolated nodules which are not easily enucleated, are dry on section, and possess hardly any vascularity. A zone of congestion surrounds them. A child suffering from this disease has frequent cephalalgia and marked

insomnia. It is restless and cries at night. Its intelligence may or may not be affected. It has occasional attacks of vertigo and emesis. Limited, superficial sclerosis causes local epileptiform convulsions, involving either a limited number of muscles, as those of the hand or forearm, or, in severe cases, of one entire side of the body. The convulsive movements may affect only one cheek, one eyelid, or one side of the face. The spasms are sometimes succeeded by coma. The most characteristic symptom consists, however, in unsymmetrical local paralysis. Sensation is rarely affected. The differential diagnosis between epilepsy and cerebral sclerosis is based upon the greater frequency and severity of the convulsions in the latter disease. The general health of the patients usually remains good and febrile movement is rare.

Suppurative Otitis Media following the Plugging of the Posterior Nares.—In an article bearing the above title (*La Tribune Médicale*, March 26, 1882), Dr. Gellé first explains the muscular mechanism by which the Eustachian tube is normally maintained in a transient patulous state during deglutition. Dr. Gellé advances a theory that the tube may become permanently permeable to air and fluids. This result depends upon the spasmodic contraction of the dilators of the tube. The muscular spasm may be caused by the irritation of decomposing blood and pus when the latter come in contact with the pharyngeal extremity of the Eustachian tube. This causative condition is present whenever a tampon, applied to control epistaxis, is left in the posterior nares for a long time, and otitis media is the result. Dr. G. refers to two cases of this kind which have fallen under his observation, and ascribes to Dr. Créquy the honor of first having called attention to the accident under consideration. The author advocates the substitution of hypodermic injections of ergotin for plugging of the posterior nares in epistaxis.

Cutaneous Lymphadenitis.—Dr. L. Galliard, presents, in the *Annales de Dermatologie et de Syphiligraphie*, March 25, 1882, an outline of the history and of the pathological changes characterizing this cutaneous disease, together with extended notes of a case observed by himself. Ranvier first demonstrated the origin of the disease, and declared it to be a manifestation of the lymphatic diathesis, although Albert and Bazin studied it before him. The new growth is often preceded by areas of evanescent cutaneous congestion, by erythema, pruritus, or by lichen. The neoplasmata grow very slowly, may be transiently retrogressive, often occasion no visceral metastases, and do not end in leucocythæmia. They occupy by preference the internal aspect of the limbs, the anterior surface of the trunk, and the frontal region. Their size varies from that of a pea to that of a large nut. Their consistency is soft, their color gray, and their surface marked by capillaries of large calibre. The neoplasms are developed in the cutis, and cause tension and projection of the epidermis. They soon produce ulceration of the latter, and discharge sanious and fetid pus upon the surface. Microscopical examination shows the tumors to be composed of reticulated fibrous tissue, the interspaces of which are filled with lymphoid cells. In spite of the slow development of these new growths, a cachectic state is established, the patient suffers from grave anæmia, the discharge from the tumors is exhaustive, and the termination is usually lethal.

Endocarditis Complicating Diabetes.—In a note presented to the Paris Académie des Sciences at its session of March 6, 1882, Dr. Lecorché called attention to the comparatively frequent occurrence of endocarditis as a complication of diabetes mellitus. He believes it to be occasioned by the irritation exerted upon the endocardium by blood charged with sugar. In eight cases out of fourteen observed by Dr. Lecorché the patients were women. Endocarditis appears late in the course of diabetes, usually two or three years after the initial symptoms. It hastens the progress of the disease by inducing anasarca and asthenia. The valves usually attacked are the mitral. The aortic semi-lunar valves were affected in only one of Dr. L.'s cases. Atheroma of the arteries was observed in two cases. The symptoms are those of endocarditis, superadded to those referable to the original disease.—*Gazette des Hôpitaux*, March 14, 1882.

The Occurrence of Sugar in the Serum of Œdematous Tissues.—Dr. Ottomar Rosenbach, of Breslau, maintains (*Breslauer Aertzl. Ztsch.*, No. 5, 1882) that sugar is an almost constant ingredient of those œdematous fluids which contain only small amounts of albuminous materials. The quantity of sugar present, even in the most marked cases, amounted to only from one-tenth to one-fifth per cent. of the transuded fluid. The transudations most frequently analyzed by Dr. Rosenbach were obtained from œdematous subcutaneous areolar tissue, by means of suitable canulæ. Sugar was also found, however, in serum withdrawn from the pleural and peritoneal cavities, and in that from the cranium of a hydrocephalic child. The presence of the sugar was demonstrated by means of Trommer's and Fehling's tests, after the removal of all albuminous ingredients of the transudation by boiling and filtration. If the fluid be exposed to the air for any length of time the quantity of sugar rapidly diminishes, owing to the occurrence of the alcoholic fermentation. Careful examinations failed to detect sugar in the urine of those patients from whom the saccharine dropsical effusions had been removed. The author was unable to observe any difference in the relative quantities of sugar contained in transudations from different parts of the body.—*Allgemeine Med. Central-Zeitung*, March 15, 1882.

Treatment of Rabies by Hoang-nan.—M. Gingeot recently reported, to the Société Médicale des Hôpitaux, a case of rabies treated with hoang-nan. His experience, in this case, led him to the following conclusions: 1. There is reason to believe that this drug may prove efficacious in the treatment of rabies. 2. It should not be administered by the mouth because it is apt to induce dysphagia and emesis. 3. The hypodermic injection of a ten per cent. aqueous solution of the alcoholic extract of hoang-nan furnishes the best method of administration. 4. The injections should be made at short intervals. 5. The maximum dose cannot be defined beforehand, in any individual case. The injections should not be suspended until symptoms of intolerance, which usually appear simultaneously with the therapeutical effects, are established.—*Le Courrier Médical*, February 25, 1882.

Is Uricæmia a Premonitory Symptom of Diabetes?—Dr. Coignard publishes in the *Journal de Thérapeutique*, certain original views relating to the etiology and the prognosis of diabetes mellitus. Dr. C. is of the opinion that an excess of uric acid in

the urine, not referable to other causes, is a premonitory symptom of diabetes. This theory rests upon extended clinical experience. The prognosis in cases of diabetes characterized by the excretion of an abnormally large quantity of urea, but by an abnormally small amount of uric acid, is, according to Dr. C., comparatively favorable.—*Le Courrier Medical*, March 4, 1882.

Spontaneous Falling of the Nails in Locomotor Ataxia.—Prof. A. Pitres, of Bordeaux, reports (*Le Progrès Medical*, February 25, 1882) two cases of locomotor ataxia, attended by spontaneous and intermittent falling of the nails of the great toes. Several weeks before the falling of the nails, there was dull pain in the extremity of the affected toes, but there was neither suppuration nor ulceration of the matrix. The fallen nails were rapidly replaced by newly formed normal ones. No injury had been inflicted upon the nails. Prof. Pitres believes that the phenomenon in question is referable to deranged nutrition of the matrix dependent upon the medullary lesions attending tabes dorsalis.

Nerve-Stretching.—MM. Duret and Bonnaire contribute a paper to *Le Progrès Médical*, March 4, 1882, bearing upon the history and the results of nerve-stretching. They contend that the results of the operation have been fairly satisfactory. Elongation of the nerves impairs their sensory but not their motor functions, producing a greater or less degree of anæsthesia according to the force employed. The operation produces marked pathological changes in the *vasa vasorum*: the vessels of the stretched nerves become dilated and sinuous, even the capillaries participating in this change. Eight or ten days after the operation, embryonic connective tissue and newly formed vessels are found in the nerve-trunks. Capillary hemorrhages may result from the elongation, but while the medullary layer and axis cylinder are sometimes divided, the sheath of Schwann remains unbroken. Certain degenerative changes subsequently occur. The degenerated fibres are usually situated in the periphery of the nerve trunks, and extend from the point of traction almost to the roots of the nerves concerned. In the cases studied by the authors, the degeneration consisted, during the first few days, in the disappearance of the myeline and of the axis cylinder in many of the fibres. Later it was characterized by hyperplasia and hypertrophy of the fibres and by proliferation of the nuclei in the inter-annular segments. Lesions in the cord and the medulla may follow nerve-stretching. M. Duval observed ecchymoses and congestion of the medulla after elongation of the *par vagum*. Considerable force may be applied to a large nervous trunk without rupturing it, but it is not admissible to employ more than fifteen kilogrammes (thirty-two pounds), even in elongating the sciatic or the median.

Artificial Curare.—At the session of the Paris Société de Biologie, held February 25, 1882, M. Rabuteau described a new drug, the physical, chemical, and physiological effects of which are identical with those of curare. It is a white salt, has a bitter taste, and is soluble in water and alcohol. Chemically considered, it is the iodide of methyltriethyl stibium. It resembles iodide of potassium, and turns blue in the presence of starch. The effect of the new drug is to annul nervous irritability without impairing muscular contractility.—*Le Progrès Médical*, March 4, 1882.

Grindelia Robusta in Asthma and Bronchitis.—Some time ago we recounted some favorable results from the use of grindelia robusta, reported to the King's County Medical Society by Dr. T. M. Rochester. Dr. Rochester's paper was referred to the therapeutic committee, which has recently made its report.

This is, on the whole, rather against the drug, though the number of cases is extremely small for a therapeutic committee to base an opinion upon.

Dr. A. Segur, of this committee, gives cases of the use of the drug in bronchitis. He says:

"*First.*—No purely spasmodic asthma was treated.

"*Second.*—One old asthmatic woman, who had marked emphysema, took fifteen minims of the medicine every two hours for a fortnight. It did not disturb the stomach, and a gradual and decided relief in the number and severity of the paroxysms was observed.

"*Third.*—A man, with chronic bronchitis for four months, and severe paroxysms of asthma, who had taken, without relief, iodide of potassium and anodyne expectorants, and inhaled the fumes of nitre paper, was promptly and permanently benefited by the grindelia; fifteen minims every three hours.

"*Fourth.*—During the two months every case of bronchitis, acute or chronic, or in phthisical patients, were given the grindelia, usually fifteen minims every two hours.

"Expectoration, cough and respiration were usually favorably modified, but not in a degree markedly different from the effects of various other treatments.

"Frequently the medicine would, after a few days, produce headache, and would have to be suspended. It was usually well borne by the stomach.

"*Fifth.*—In two cases of asthma, in private practice, I have used grindelia. In one with marked benefit; in one with none at all."

Dr. Charles L. De La Vergne reports that in three cases of spasmodic asthma there was much improvement; in four others there was none.

Dr. William M. Thallon reported two classical and obstinate cases of spasmodic asthma, both of which were rapidly and permanently relieved by half-drachm doses of fluid extract of grindeliæ robust., q. 4 h. to q. 2 h.

Dr. J. A. McCorkle reported three cases of spasmodic asthma, in which grindelia was ineffectual. The disease was relieved by potas. iodid. and arsenic. Dr. McCorkle says (basing his opinion apparently on the three cases):

"From my observation of grindelia robusta, I am led to the belief that in pure spasmodic asthma it is of little value. In the catarrhal forms we might expect better results, on account of the oleo-resin it contains, and its demulcent properties. In my judgment the drug has no special medicinal virtue to recommend it above many other and better known remedies of its class.

"Its action is that of a nauseating and stimulating expectorant. Its high price and nauseous taste are against it, when compared with other less expensive and more palatable drugs.

"Certain cases of asthma are undoubtedly relieved by its use; also many by that very depressing agent, lobelia, while the great majority will yield kindly, and somewhat permanently, to the action of potassium iodide and arsenic."

Dr. Alex. Hutchins had used the drug in a number of cases of dyspnœa. He did not find it efficacious.

THE DANGERS FROM CANULE IN TRACHEOTOMY, AND THE PROPER KIND TO USE.—In the *Annals of Anatomy and Surgery* for January, Dr. Henry J. Garrigues gives a synopsis of an elaborate monograph by Dr. Oscar Bloch, of Copenhagen, on the above subject. After a review of the injuries that may be caused by the tracheotomy-tubes, he says: "The chief point in the preventive treatment is to use a proper canula. After giving in detail the measurements of the trachea, as found by different surgeons, and the width of different canulæ, the author recommends the following dimensions of the outer canula:

Age.	Circumference.	Diameter.	
0–1 year.	17 mm.	$5\frac{2}{3}$ mm.	$\frac{1}{3}$ in.
1–2 years.	21 "	7 "	$\frac{7}{25}$ "
2–3 "	24 "	8 "	$\frac{8}{26}$ "
3–5 "	27 "	9 "	$\frac{9}{25}$ "
5–7 "	30 "	10 "	$\frac{2}{3}$ "
Above 7 "	31–47 "	$10\frac{1}{2}$–$15\frac{2}{3}$ "	$2\frac{1}{6}$–$3\frac{2}{6}$ "

"For general practitioners he advises especially to keep the three sizes designed for children between one and five years.

"The length, as commonly used, is 4.5–5 ctm., and that is satisfactory. As to shape, he gives the preference to Parker's model, with the open angle and sloping lower aperture. The canula ought to be of silver, with movable neck-plate. If the presence of an ulceration in the trachea, due to pressure, has been diagnosticated, a silver canula of a different length may be used, or it may be replaced by Morrant Baker's canula of red vulcanized rubber, or by a simple drainage-tube of the same material, retained by a large safety-pin placed transversely to the direction of the wound in the neck.

"If no canula be obtainable, a simple drainage-tube may be used, or the lips of the wound kept apart by a couple of hair-pins.

"Nine cases of fatal hemorrhage from pressure of the trachea are related. In eight others the innominate artery was found to be separated from the canula by a thin, fibrous membrane, which would soon have given way. Still, as a rule, the pressure of the canula is not dangerous.

DIPHTHERIA—SUDDEN DEATH IN CONVALESCENCE.—Dr. W. H. Johnson, of Selma, Ala., sends us the history of a patient, aged seven, suffering from diphtheria. The child was treated with a mixture of tinct. ferri muriat., ℥ viij., and potas. chlorat., gr. iv., in glycerine and water, every two hours, night and day. The nostrils were washed out with a solution of boracic acid and hyposulphite of soda. The throat was touched three times daily with a mixture of tannic acid and tincture of iron in glycerine. Abundant food and stimulants were given. At the end of the seventh day, evidences of great improvement had appeared and convalescence was nearly established. Suddenly, after having had a large movement from the bowels, the patient turned on her side and in a moment was dead.

Dr. Johnson makes the following remarks:

"Until the last morning I had but little, if any, doubt of the ultimate recovery of my patient. The swelling in her neck had disappeared and only a small deposit was left in her throat, and she was taking plenty of nourishment up to twelve or fourteen hours preceding her death. The only symptom that gave me any anxiety, after the vomiting ceased, was the rapid fall in the pulse. At 6 P.M., on 15th, pulse was 117; and on the morning of 16th, at 8 A.M., pulse was 84, and all other symptoms favorable, and I considered that also favorable. The same afternoon, at 6 P.M., it was 70 and still no other symptoms to account for this rapid and steady fall in the pulse. The volume was good, and fair strength to the beat. On the morning of the 17th, pulse was 48, but she had been vomitting most of the night; at such a time I expect to find a frequent and feeble pulse. This pulse reminded me very much of one that had been reduced by giving veratrum. Could the chlorate of potash in the doses given have slowed her pulse? Never in any other case has it so acted with me.

"I have no doubt this child had diphtheria two days before treatment was commenced. I knew of no cases in town and did not examine her throat.

"I have almost, if not altogether, absolute faith in the iron and potash treatment *when commenced within twenty-four hours from the onset of the disease, and when the patient will take the medicine and nourishment day and night, and as given above.* I have treated many of these patients before, and never had one die under this treatment, when seen during the first twenty-four hours. I know there are many mild cases that will get well under almost any kind of treatment. But even in this case the swelling in the neck (the anterior surface of neck was nearly on a level with her chin) had disappeared, and the deposit had all gone but a slight patch. The nose had become clear. I am satisfied this was due alone to the iron and potash.

"I did not at any time examine her urine. The kidneys acted throughout the disease and her mind was clear. Fifteen minutes before death she asked for milk and drank it. She was not permitted to raise herself when her bowels acted the last time, and she died without a struggle. Her attendants stated everything seemed to be going on well up to the time of the movement of her bowels. Had I been sent for during the night I should have given stimulant and nutrient enemas, and put nothing in the stomach. I saw her in the morning, noon, and evening throughout the disease. Twenty-four hours before her death I had no doubt in my own mind of her recovery. I thought the immediate cause of death was paralysis of the heart."

A HOSPITAL FOR THE MINERS.—It is stated that Mr. Moses Taylor has given $250,000 in first mortgage bonds of the New York, Lackawanna & Western road for the purpose of founding and maintaining a hospital at Scranton for the benefit of miners, railroad men, iron-workers, and others. The value of the bonds makes the gift equal to $270,000. The hospital will be under such rules and regulations as may be adopted by the trustees, President Hatfield, of the Lackawanna Iron and Coal Company, and President Sloan, of the Delaware, Lackawanna & Western Company. The need of such a hospital is very great. Last year alone, forty-four men were killed in the mines of this valley, and more than twice that number were maimed at their work. Scarcely a day passes without an accident in which some man or boy is injured.

WORK OF THE MEDICAL MISSION.—The report of the New York Medical Mission for the first quarter of 1882 shows that the number of new cases applying for relief was 740. Attendance has been given at the dispensary to 1,782 persons, and 579 visits have been paid to sick persons at their homes. The mission will remove to No. 81 Roosevelt Street.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, May 13, 1882.

VEGETABLE PATHOLOGY AND TERATOLOGY.

THE subject of vegetable pathology has of late been urged upon the attention of physicians. It is a branch of science as yet almost unknown, but one which might well broaden the doctor's knowledge as well as amuse his leisure hours. Since Sir James Paget, two years ago, so eloquently discussed its merits, there have been a few short contributions from English writers. Recently, Dr. T. J. Burrell has written an article (*Science*), showing much intelligence and earnestness, upon the subject in question. The physician, and especially the rural practitioner, can learn from it that there is much more in the phenomena of plant-life about him than he has ever suspected.

Plants are not subject to acute diseases, unless we consider their occasional rapid destruction by certain fungi as such. When a limb is lopped off, it is a whole year in healing; great injuries to one part do not affect the rest, unless the supply of nourishment is cut off. This slowness of change and physiological independence of parts is due to there being no nervous system in plants and to the very moderate rate of the circulation. The sap in a tree ascends, at its best, at the rate of only a foot an hour. The circulation is but a kind of soaking. Vegetable pathology has to do chiefly, therefore, with chronic and generally with local disease.

Yet this is not all. The protoplasm of plants, like that of animals, is plastic and susceptible to modifications. New varieties can be quite readily formed and perpetuated by inheritance. These new varieties have an independence of environment peculiar to vegetable protoplasm. This is seen by the grafting of good fruit on bad. In this way one can almost gather "figs from thorns and grapes from thistles." Furthermore a careful study of many of the new forms which florists and gardeners display will show that they are really monstrosities, as really so as the armless man or the giant Chang. The cabbage is the succulent illustration of an enormous hypertrophy. From the standpoint of the normal rose, the Marshal Niel is a distorted outcast. Many other beautiful flowers and leaves, as well as favorite vegetables, are, strictly speaking, morbid specimens. Vegetable pathology is therefore linked closely to teratology.

The two kinds of disease referred to by Dr. Burrell as being most prominent are those produced by certain animal poisons, *i.e.*, the bites of insects, and those resulting from the presence of parasites and fungi. The bites of insects produce various forms of galls, which illustrate remarkably the processes of disease in plants. Different insects produce different neoplasms, and there seems to be something truly specific in the animal poison which excites their growth. There are hundreds of varieties of galls easily distinguishable, and each one owes its existence to a different agent. There are also insects whose bites produce morbid effects different from that of the gall.

The number of parasites which infect plants is enormous. There is hardly a flowering plant in the country which is not injuriously affected by one or more fungi which prey upon it. The grapevine alone is attacked by at least thirty species of fungi. In some cases the plant must be first injured, perhaps its epidermis be broken, before it can be affected. But this is not always necessary. The morbid changes which these parasites induce are manifold, the "rust" on wheat, the "scab" on apples, the rot in potatoes and in fruits, all represent the activity of foreign and antagonistic elements.

There is, as yet, little known regarding most of the deeper changes in vegetable pathology. It is a fruitful field for the doctor who would select for himself a "hobby."

DOCTORS' FEES IN LONDON AND ON THE CONTINENT.

The fees of the London consultant are, for a first visit three to five guineas, for a first office consultation two guineas, for subsequent calls one guinea. There is this objection to the system in London, which does not hold in New York: it is not considered etiquette to charge less than a guinea; hence many young men have to suffer, as well as many patients. The custom is a bad one, since it tends to help the big men and injure young physicians.

On the Continent, in France and Germany, there is, according to the *Pall Mall Gazette*, a regular tariff for the visits of medical practitioners, often—indeed generally—exceeded by rich patients, but affording a guarantee against excessive charge for the poorer. It is also a satisfaction to the public mind generally to know exactly what they will have to pay when calling in a doctor. There is another

point of medical etiquette in North Germany. Except in cases of severe illness, when daily attendance is absolutely necessary, a doctor never repeats a visit. He must be requested to do so. This custom has its advantages, as it will often happen in cases of slight illness that a single visit suffices. If medical fees are too high in England, they are too low in Germany and France (2 marks and 2 francs a visit), excepting, of course, in the fashionable watering-places, whither none but rich folks must betake themselves.

CHINOLIN IN THE TREATMENT OF WHOOPING-COUGH.

The manufacture of chinolin, a substance closely related chemically to quinine, has excited considerable attention. It was hoped that it might do the work of quinine, while it could be furnished at a much less price. The drug can be made in several ways. That described by Dr. G. Koch, of Wiesbaden, consists in the addition of glycerine and sulphuric acid to aniline, or nitro-benzole. The reaction is as follows: $C_6H_5NO_2$ (nitro-benzole) + $C_3H_8O_3$ (glycerine) = C_9H_7N (chinolin) + H_2O + O_2. The chinolin is then turned into a tartrate, in which form it keeps well, and has no very disagreeable taste.

Chinolin has been used considerably as a substitute for quinine in ague and in fevers, but, so far, with poor success. Recently, however, Dr. Koch has announced *(Berliner Klinische Wochenschrift)* that it acts very favorably in whooping-cough.

This disease is one for which a long list of remedies has been recommended. No drug has yet been found, however, about whose value there is any wide agreement, and many physicians are very sceptical as to drugs being of much use. Whooping-cough is a self-limited disease, running its course in ten, twelve, or eighteen weeks. It is hard, therefore, to tell whether a medicine has really helped it.

Dr. Koch claims for chinolin that it shortens the duration of this malady, and makes the symptoms milder. He reports eighty-five cases treated with the new remedy. The patients were between one and ten years of age. In thirteen cases the symptoms of the disease stopped within two weeks; in twenty-one cases within three weeks; in nineteen cases within four weeks. The average duration in the eighty-five cases was 4.2 weeks. In many of them, where the symptoms continued for seven, eight, or nine weeks, the patients had an intercurrent disease, or did not take the medicine regularly, or else were feeble and unhealthy. The daily amount used was from gr. iv. to gr. xv., given usually in divided doses, every three hours. It is stated that the effect of the drug was to make the whooping and spasmodic character of the cough disappear very soon, so that the child seemed to suffer only from a bronchial catarrh. Our author quotes his colleague, Dr. Slefeld, as stating that chinolin is very efficacious in bronchial catarrh.

Dr. Koch's statistics should carry some weight. Nevertheless they are deficient, in that he does not state at what period in the disease he began to use the drug he recommends.

THE BRAINS OF CRIMINALS.

Some time ago Benedikt, of Vienna, published a work on the brains of criminals. As a result of his studies he concluded that "chronic" evil-doers had a different kind of brain from ordinary persons and were, in fact, an anthropological variety of their species. The distinguishing characteristics of the criminal's brain are, according to this author, 1st, the confluence of many of the primary fissures; 2d, the existence of four instead of three frontal convolutions. A typically criminal brain is one in which, "if we imagine the fissures to be watercourses, a body floating in any one of them could enter all the others." The existence of an extra frontal fissure is thought to indicate a reversion to the type in certain lower animals, *i.e.*, carnivora.

Since Benedikt first announced this view he has made further researches and now bases his conclusions upon the examination of eighty-seven hemispheres from forty-four criminals. In somewhat over half of these cases the fissure of Rolando communicated with one or more other fissures. In about two-thirds of the hemispheres the fissure of Sylvius communicated with other fissures, especially the interparietal and the fissure of Rolando. The interparietal fissure always had one or more communications with its lesser neighbors.

The greater preponderance of fissures indicated, it was thought, a deficiency in the associating or connecting fibres of the convolutions and hence a lower structual type.

The radical conclusions announced by Benedikt have naturally been received with much distrust, a distrust somewhat heightened by the peculiar reputation of this author. It is not denied that his special observations are in the main correct, but it must be shown that the peculiarities which he found were not racial, or accidental, or were not found in other classes. This he has not yet shown.

A recent contribution by an American, Dr. Wm. Osler, of Montreal, has thrown additional light upon the matter. He has examined the brains of two executed criminals and also sixty-three hemispheres from thirty-four individuals who died in the Montreal General Hospital. He found that the brains of the two criminals showed the confluent type to only a slight degree. In one hemisphere there were four frontal convolutions. Of the hospital brains he found a considerable proportion having the confluent fissure type, though with not quite so marked fissural connections as Benedikt describes. Hemispheres

with four frontal convolutions were found in a few cases. The conclusion drawn is that we cannot yet tell what the confluent fissures and extra frontal gyri indicate. Certainly they do not necessarily show that the brain is an inferior one, for they may exist with a very rich convolution system.

The collapse (and we might give other reasons for considering it such) of Benedikt's attempt to furnish an anatomical basis for crime does not mean that such attempts will end. It is the tendency of modern physiological science to make mental states entirely dependent on material structure. The doctrine teaches that a man's mind is as much the slave of his brain cells as his digestion is of his stomach. He is in the clutches of an anatomical fatalism. His inherited tissues modified somewhat by education alone, shape his moral character and destiny.

Benedikt's effort to formulate this, even now, widely entertained view of man should at least call the attention of students to the proper methods of meeting so great an innovation upon the older theories of responsibility.

FREEDOM IN CONSULTATIONS.

The opinion of the learned jurist, Prof. Theodore L. Dwight, upon the subject of freedom in consultations, published in another column, will doubtless command a wide reading. Especially will this be the case among those who are still unsettled in their convictions as to the wisdom of the State Society of New York in making such a provision in its new code. It is fair to presume that the views expressed in his communication are entirely unprejudiced, and are based on those general principles of law, equity, and morality which should govern men in all their varied relations to the community and to each other. As such they will doubtless have their due weight.

Trichinosis in American Swine.—A discussion was recently held in the Paris Académie des Sciences, regarding trichinosis in American pigs and the prohibition of the importation of pork from this country (*Le Courrier Médical*, March 4, 1882). The majority report of the committee charged with the investigation of the subject embodied the resolutions here briefly subjoined: *Resolved*, That it is unnecessary to subject pork imported from America to a microscopical examination, with a view to preventing the development of trichinosis in the consumers of this meat, because the culinary processes adopted by the consumers are found to completely guard them from infection. *Resolved*, That special circulars be distributed by the government among the rural population, for the purpose of warning against the danger accruing from the use of raw or uncooked pork. These resolutions were adopted by an immense majority, and forwarded to the Minister of Commerce.

A Bill to Regulate Dentistry is before the Iowa Legislature. No one is to be allowed to practise without having a diploma from a reputable college.

Reviews and Notices of Books.

The Human Ear and its Diseases. A Practical Treatise upon the Examination, Recognition, and Treatment of Affections of the Ear and Associate Parts. Prepared for the instruction of Students and the Guidance of Physicians. By W. H. Winslow, M. D., Ph. D. 8vo, pp. 526. New York and Philadelphia: Boericke & Tafel. 1882.

This book has been written by a homœopathist, if one may judge by the names of the institutions and the society with which his name is associated on the title-page. The author does not state why he thought it worth while to write a book on the ear, but we are inclined to believe that he wishes to convey the idea that his method of treatment differs from that of the regular practitioner. This, on examination of the book, proves to be true to a certain extent, but we find that the author frequently runs short of sectarian remedies and has to resort to the time-honored drugs of the "old school." But it is particularly in the local treatment that the author seems to find himself very much at home among the medical and surgical methods of the "regular" school. In some instances he even employs means that are no longer in general use. If there can be such a thing as over-treating the ear, as has been hinted in some quarters, we fear the recommendations of the author would render him liable to such a charge.

The author's experiments with the audiphone lead him to agree with competent authorities as to the usefulness of such aids to hearing in certain cases. The author acknowledges his indebtedness to Dr. Charles H. Burnett's standard treatise on the ear, and he has also made liberal use of Schwartze's work on the pathological anatomy of the ear.

The book is well printed, and the type is commendably large and clear.

First Aid to the Injured. By Peter Shepherd, M.B. American revision by Bowditch Morton, M.D. 16mo, pp. 88. New York: G. P. Putnam's Sons. 1882.

There are many emergency books, most of which are addressed to the profession. In this little work, however, we have a concise manual, written with the avowed purpose of instructing the laity as to what should be done in case of accident before the arrival of skilled assistance. It is prefaced by a brief synopsis of the points in anatomy and physiology, which should be matters of common knowledge, none but the simplest of technical terms being introduced.

The Opium Habit and Alcoholism. By Dr. Fred. Theman Hubbard. 8vo, pp. 259. New York: A. S. Barnes & Co.

This work is couched in terms calculated to render it popular with the laity rather than with the medical profession. It describes, quite accurately, the train of morbid phenomena induced by the various drugs concerning the abuse of which it treats. The curative measures proposed are partly familiar and partly original with the author. He recommends the gradual substitution of cannabis indica for opium in the opium habit. His treatment of dipsomania consists in confining the patient to foods thoroughly flavored with a mixture of various liquors, until a disgust for all spirituous drinks be established. The book is printed with worn type and has no index.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 4, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE LIBRARIAN acknowledged the reception of 259 bound and 14 unbound volumes, 160 pamphlets, and 1,303 medical journals. Two hundred and fifty-four bound volumes were from the library of the late Dr. Robert A. Barry.

The Statistical Secretary, DR. F. V. WHITE, announced the death of James Rushmore Wood, M.D., LL.D., which occurred May 4, 1882, in the sixty-fifth year of his age, and from double pneumonia.

The PRESIDENT remarked that the public, the profession, the Academy, and the medical institution to which he belonged had met with a great loss in the death of Professor Wood, and that appropriate action on the part of the Academy would be subsequently taken.

DR. JOHN G. ADAMS then read a

MEMOIR OF JAMES OTIS POND, M.D.,

and presented, in behalf of the family, a crayon portrait of the deceased. The text for this fitting tribute was "The faithful steward."

THE EARLY DIAGNOSIS OF CHRONIC BRIGHT'S DISEASE.

The discussion on Dr. T. A. McBride's paper on the above subject (see vol. xx., p. 607) was opened by DR. W. H. DRAPER, who first alluded to the fact that Bright recognized all the forms of kidney disease which, since his time, have been more fully described, although he offered no explanation of the morbid conditions. While no fixed characteristic clinical picture of the different forms of the disease had been established, there had been recognized two varieties of chronic nephritis: 1, the large white kidney; 2, the atrophied kidney; and it was to the latter affection that special reference was made in Dr. McBride's paper and the discussion which followed. It was that insidious form of the malady which never began with any symptoms that called attention to the kidney prominently; in which albuminuria might never be a prominent symptom, might never be detected, and in which dropsy was never an initial symptom, etc.

With reference to this affection—the cirrhotic kidney—Dr. Draper directed attention to certain points in etiology.

First—and one of the most important factors—*heredity*, admitted by most authorities on renal pathology. In this connection reference was made to its occasional coexistence with glycosuria, vascular diseases, as cerebral apoplexy, and with ancestral cardiac disease.

Second.—The existence of the gouty habit, whether inherited or acquired. There was a pretty general unanimity of opinion among clinical observers upon that point. Todd, in 1846, first described the shrivelled gouty kidney.

Although a frequent complication, it was regarded by some as merely a coincident associate with gout. Bartels and Dickinson were very positive in their statements that the two diseases had an etiological relation. Granger Stewart was less positive in his statements. Garrod distinctly recognized the frequency of the association of granular kidney with gout. In considering gout in all its relations Dr. Draper regarded it as essential to observe it as a general disease, of which lithæmia and trophic changes were important factors.

Third.—Senility.—The cirrhotic kidney was a disease of declining years. It was extremely rare under twenty years of age; the largest proportion of cases occurring between the ages of thirty and sixty years, a period in which the general failure of the processes of nutrition occurred. This fact pointed toward the conclusion that the granular kidney was a part of the general trophic processes induced either by the limits of heredity or the wear and tear of life.

All these factors should enter into the study of the etiology of the disease, and when closely analyzed pointed strongly toward the conclusion that the affection was a general rather than local one; and that renal and vascular disease have a common origin in blood dyscrasia.

The theory that there was a functional stage was one which the observations of many clinical observers tended to confirm. For example, persistent high specific gravity of the urine had been regarded as an important symptom of this stage, high arterial tension, etc. Dr. Draper believed that the proper appreciation of the functional stage of the granular kidney was to be found only in the proper appreciation of the etiological factors considered: 1, heredity, 2, gouty habit, and, 3, senility; and, probably, then only a conjectural diagnosis of the formative stage would be reached.

The PRESIDENT referred to the fact that in the discussion of the subject of Bright's disease, which occurred in the Academy more than twenty years ago, the relations of glycosuria and renal disease were set forth as then understood. Since that time, however, great advance had been made in etiology and diagnosis, but the subject of therapeutics had not received the attention he had hoped it would, and in that respect he asked for a contribution upon one point—namely, the special condition of the heart in which digitalis could be used with probable benefit. With discrimination, he had found it an exceedingly valuable remedy in acute albuminuria, but in a certain class of chronic cases it had seemed to him that it was specially contraindicated.

DR. ANDREW H. SMITH, in reply to the question put by the President, referred to the quite positive statement made by Fothergill, that digitalis acted as a diuretic only when it increased arterial tension. With reference to the general therapeutics of Bright's disease, he had found that the milk diet gave very satisfactory results. He also thought it essential that the patients should be in the open air as much as possible. He asked Dr. Draper if gout, in its frank condition, occurring among those who ride and hunt, etc., was as liable to be associated with renal disease as when it existed in persons who followed a more sedentary course of life.

DR. S. O. VANDER POEL referred to the propositions made by Dr. Kinnicutt in his paper on "Transient Albuminuria," and mentioned by Dr. Draper. The propositions were: "First, the temporary presence of a large amount of imperfectly oxigenated matter in the circulation. Second, disturbances of the general nervous system, in which the vaso-motor

system of the kidney shares, or one confined to the vaso-motor system of the kidney in its elimination of these products of a faulty digestion. Third, a transient dilatation of blood-vessels in the kidney, and a retardation of the blood-current in the glomerular vessels, with possibly consequent alteration in the functions of the glomerular epithelium, also of a temporary nature."

To the first proposition he could accede, but, in his mind, the last two were not convincing. He recognized fully the condition of low arterial tension as being almost always the immediate cause of albuminuria. For example, the first urine of cholera was albuminous, also the first with suppression in yellow fever, the urine in pneumonia, cardiac disease in the later stages, pulmonary emphysema, etc. These cases, however, hardly came under either of these two heads.

The red kidney, to which allusion had incidentally been made by Dr. Draper, he thought was not, properly speaking, a kidney disease, but rather an illustration of the effect produced by a general disease, probably having its primary seat in the vessels.

With reference to digitalis, he thought that it was rarely applicable until the latter stages of the disease, until cardiac dilatation began to take the place of the hypertrophy.

Dr. Kinnicutt said that he did not advance his propositions with the view to explaining all cases of temporary albuminuria, but merely as applicable to a certain number.

With reference to the topic on which Dr. McBride and Dr. Draper had written, he thought it would be generally admitted that it was of great importance to determine, if possible, whether any of the commonly accepted cardinal symptoms of granular kidney, viz., polyuria, albuminuria, casts, increased arterial tension, cardiac hypertrophy and changes in the fundus oculi, were so commonly present in the early stages of the affection, as to render its recognition at each time possible. Although granting that no one of these symptoms was constantly present, nevertheless it had seemed to him that certain ones were of sufficiently common occurrence to demand especial attention; namely, increased arterial tension, polyuria, and the presence of hyaline casts in the urine. The existence of increased arterial tension in the early stages of granular kidney, in the majority of cases, was at the present time, he believed, very generally admitted. Its importance as a symptom had been very fully discussed by Dr. McBride in his paper, and he would therefore confine his remarks to the presence of hyaline casts (*i. e.*, casts, homogeneous, without fibrillation and unaffected by acetic acid) in the urinary water.

The tendency of modern English pathologists and clinicians, and also American, it seemed to him, had been to underestimate the value of this symptom. Dr. George Johnson had taught that little value need be attached to their presence. Dr. Saundby, on the contrary, held quite an opposite opinion. Quite recently Autrecht had apparently demonstrated, by a series of experiments on animals, that hyaline casts were the result of an irritation of the renal epithelium, in consequence of which "it secretes a clear fluid in drops, which subsequently run together into cylinders, taking the form of the tubuli." These observations have been confirmed by Cornil. As Dr. Saundby had suggested the production of casts of this type probably represented "a process of minimum intensity, which when due to a transient cause may leave no traces behind it. They become significant in proportion to their number and persistence." In consideration of the above reasons, among others, it seemed to him that the presence of hyaline casts alone, and particularly when associated with high arterial tension, might be regarded as an important symptom in the recognition of the early stage of granular kidney, possibly in that stage which had received the name of functional, and which was now admitted by many pathologists and clinical observers. The fact of their common occurrence in small numbers certainly, in aggravated cases of lithæmia in adults, was at least suggestive.

Dr. F. A. Burrall was of the opinion that albuminuria by no means existed as a frequent concomitant of lithæmia. He gave the results of two hundred examinations of urine, in eighteen of which albumen was found. Of these eighteen, in but one did uric acid exist, and in two oxalate of lime. In three specimens the specific gravity was 1010; in eight, 1008; and in seven, 1030.

Dr. McBride regarded as the most important point in the discussion the ascertaining, if possible, whether chronic Bright's disease could be recognized by a sufficient number of early symptoms to establish a clinical picture of the beginning of the affection. At the present, our diagnosis was based mainly upon the low specific gravity and quantity of the urine and the presence of certain casts and epithelial cells, etc. If it could be said that the disease was present before these symptoms, constantly observed, were developed, a great gain would be made, and with this object in view he had directed attention to persistent high specific of the urine, high blood tension, cardiac hypertrophy, and diseased arteries. He was well aware of the exceeding difficulty in reaching a correct estimate of these symptoms, especially high blood tension.

He thought that to Dr. Draper, in this country, we owed the most intelligent and successful regulation of the diet in the treatment of the diseases of suboxidation, and he hoped that Dr. Draper would give an outline of the plan.

Dr Draper, in closing the discussion, disclaimed any originality in the plan referred to by Dr. McBride, and said that his attention was first called to it by a remarkable book "On the Pathology and Therapeutics of Suboxidation Diseases," published by Bence Jones in 1860, and in which the views of Liebig were applied to the treatment of gout and its allied disorders. The subject was too large to admit, at that late hour, of even an attempt to give an outline, as suggested by Dr. McBride, but he would be pleased to present his views in full on some future occasion.

With regard to Dr. Smith's question, he was unable to answer it, and thought that it could scarcely be answered.

As to the use of digitalis, he regarded it as inapplicable until the later stages of the granular kidney, inasmuch as the condition during all the earlier stages was just that sought to be produced by the drug. Wherever cardiac disease complicated the renal affection, if the lesion was mitral, the digitalis was of great value, as it was whether kidney lesion existed or not; but with aortic insufficiency it should not be used, as it would lengthen the diastole and increase the risk of fatal syncope.

For the dyspnœa of cardiac disease in the later stages, morphia was the most efficient remedy that he had ever employed, being far better than digitalis.

The Academy then adjourned.

Correspondence.

CONCERNING FREEDOM IN CONSULTATIONS.

To the Editor of The Medical Record.

Sir: I send with this a paper by Professor Theodore W. Dwight, LL.D., Dean of the Law School, Columbia College, New York, containing his opinion on the "New Code." I asked Dr. Dwight to make a study of the subject. I gave to him as data the "Old Code," the "New Code," and the editorials and excerpts of the *Medical News*, Philadelphia, and The Medical Record. He was therefore provided with all the publishe l factors in the case. No one in America, as all intelligent critics will agree, is better fitted than he to look at the question involved without prejudice, and in the good light of pure ethics. He ignores entirely in his discussion the puerile personalities with which some have invested the subject. Such decaying elements quickly disappear, when one comes to consider a great question away from the atmosphere of partisanship and mere passion. The friends and advocates of liberty have always been harshly dealt with in their day and generation, their motives suspected and denounced. They have been gibbeted from time beyond memory. It is refreshing when one finds himself gibbeted, to know that it is soon over, and then comes the reward. When the flames of unjust criticism die out we shall then gather up the pure results which have come out of the embers, and take a new departure, which will make us all, I trust, worthier members of a profession deserving the name of liberal. Ever yours faithfully,

C. R. Agnew.

May 5, 1882.

My Dear Dr. Agnew: I have examined the papers which you submitted to me a few days ago concerning the recent regulation of the State Medical Society of New York governing consultations. The rule, as I understand it, is as follows: "*Rules governing consultations.* Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity." I find this section in a "Code of Medical Ethics" laid down by the society for the guidance of the action of its members in matters of morality and conscience. One of the leading divisions of this concerns the relations of physicians to the public, another the rules concerning consultations, while the third division applies to the relations of physicians to each other. All of the points, as far as I can observe, concern moral relations, including the general observance of the rules of kindness, good feeling, and humanity toward all men suffering pain and disease who can be relieved by medical skill and attention, as well as the duties of courtesy and mutual aid toward professional brethren.

In the outset, it must be fairly presumed that medical ethics are but a branch of universal ethics or morality. They are but the application of the general rules of morality to special cases. All intelligent men who have a cultivated moral sense are capable of judging of them. They ought, then, to square with the rules of general morality. Any special medical rule professing to be "ethical," which is based on a violation or restriction of the great rules of morality, is in itself "unethical," opposed to public policy, and fraught with evil and disaster to the non-medical public as well as to physicians themselves.

From this point of view, the rule that I have quoted above must be interpreted. There is another cardinal rule of interpretation to be stated. This is, that the whole of the rule of the society must be taken into account. It must be considered with its qualification. Fairly interpreted, the rule has the following prominent points: (1). The members of the State Medical Society may meet in *special cases* in consultation "legally qualified" practitioners of medicine, not members of the society, in fact any and all of that class, notwithstanding general *restrictions* on this subject. (2). The special case referred to is an "emergency." An emergency is a matter of pressing necessity—an unforeseen casualty—a sudden occasion ("Worcester's definition of Emergency"). (3). The object of giving way to the "emergency" is "to yield to the demands of humanity." (See the rule.) Still more, the rules, as I observe, apply equally to physicians and surgeons. All through the code, medical and surgical practice is referred to. Under this rule, the question might arise whether a "legally qualified practitioner of medicine" might call in consultation an eminent surgical practitioner of another school. The question might be as to the direction of a gun-shot wound, whether it extends from below upward, or from above downward. This may be vital to the treatment, and his opinion may be to the last degree important, and so in a thousand other cases where all schools of medicine act in common. The object of the consultation, I repeat, is "the demands of humanity." It is the suffering patient who requires it, and who may have no other succor. (4). The regulation is permissive. No one is required to follow it. If you ask how shall abuse be avoided, the answer is, the physician who is called in consultation must *exercise his own judgment*. To that in the end all questions of ethics must come. Ethical rules are established only to guide the judgment. The great value of the new rule, if it have a value, as I am sure it has, is that it substitutes an elastic for an iron-clad rule. The Medical Society says in substance to the practitioner, We will not place you under a stern rule without any exceptions. We retain the *general rule* by implication. Humanity may demand its relaxation. Whether it does so or not in the special case, we, as a society, have no means of determining: of that we must leave you, the practitioner, in possession of all the particular facts in the case, to be the judge.

Having thus considered the true scope and purport of the rule, the remaining question is, Is it right? Is it ethical? The question answers itself: Shall a true physician hesitate before any lawful acts when driven to it by the "demands of humanity?" The patient does not exist for the rule of the profession, but the medical profession always and everywhere for the good of the patient. It is *par excellence* the profession which deals with man in a "matter of humanity." Take away from it that element, and you shear from it its royal prerogative. If this rule is not right, then it should be put in this form: "Members of this society shall not consult with legally qualified practitioners of any other society than our own, not even if an emergency arises in which the demands of humanity require it." Can

any right-minded physician vote for such a resolution? And yet is not that the position that the opponents of this regulation must take? I should say unhesitatingly that any such ground taken expressly or by implication is contrary to public policy and worthy of public reprobation.

There is another suggestion which may not be out of place. The State Medical Society exercises a right conferred on it by the statutes of the State. It is not a mere voluntary society, but has certain compulsory powers conferred upon it by law. It profits by the exclusion of unqualified persons from practice. When the State authorizes practitioners of other schools to practise medicine, does not courtesy to State authority dictate recognition of their fitness for association? How can the State Medical Society consistently demand public recognition by reason of State legislation, and yet deny it to others who have precisely the same authority?

I cannot but think that the rule that you have brought to my attention is sound and salutary, and worthy of the advancing stage of medical thought and ethical refinement. Let us never sacrifice the demands of humanity to professional etiquette, nor imitate the poor King of Spain, who is reported to have lost his life because, by the laws of a rigorous Spanish ceremonial, no one was at hand who was professionally competent to move his chair from the fire that was slowly gnawing at his vitals.

Yours very respectfully,

THEODORE W. DWIGHT.

COLUMBIA COLLEGE LAW SCHOOL, NEW YORK, April 24, 1882.

OVARIOTOMY ABROAD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Having had an opportunity of studying the methods of operating followed by some of the most eminent ovariotomists in Europe, I thought that perhaps a short description of the method adopted by each individual operator might not prove uninteresting to some of my professional brethren in America.

I shall commence with Monsieur Péan, the distinguished surgeon of the Hôpital St. Louis, Paris. As a general surgeon, Péan operates neatly and dexterously; and his appearance is decidedly impressive, as he always operates in *full dress*. His method of doing ovariotomy, however, does not make a very favorable impression on the spectator. The patient lies on a sort of double-inclined plane, her arms and legs being securely fastened to the operating-table by straps; and a mackintosh sheet, with a hole in its centre, extends from her chest to a point midway between the knees and ankles. The operator is attired in a long mackintosh apron, and having *seated* himself in front of the patient, between her legs, he proceeds to make the usual abdominal incision; securing all bleeding vessels with (Péan's) hemostatic forceps. The peritoneal cavity having been opened and the cyst exposed, it is punctured with a moderate-sized, curved trocar, and the fluid flows over the mackintosh which covers the patient, and which is converted into a gutter between her legs, into a second gutter made by depressing the mackintosh apron between the legs of the operator, and, finally, into a large basin at the operator's feet. The cyst, having been emptied, is extracted. The pedicle is tied with a double silk ligature (the ends of which are cut off short), divided, and the stump returned into the abdomen. The "toilette du péritoine" is not made with sponges, but with dry, warm napkins, which are allowed to remain in the peritoneal cavity until all the silk sutures which are used for closing the abdominal wound have been introduced.*

The napkins are then withdrawn and the abdominal wound closed. The operation is done strictly "à la Lister," even the protective being used. The dressing is kept in place by long strips of very strong adhesive plaster, which is *very tightly* applied. The after-treatment is simple: for the first twelve or twenty-four hours but little is given except sufficient ice to allay thirst; then milk, or broth, in small quantities, frequently repeated. As convalescence progresses, a little solid food is allowed. Mr. Péan's hospital ovariotomies are done in a "maison de santé," which is under the management of Sisters of Charity, who act as nurses. As an anæsthetic, Péan uses sulphuric ether in ovariotomy, while he uses chloroform in general surgery.

I had not the pleasure of seeing Mr. Lawson Tait do a "full-fledged" ovariotomy, but I saw him perform oöphorectomy; and, in one case, I saw him make an abdominal section, and puncture two ovarian cysts, each the size of an orange, and universally adherent. The contents of the cysts having been withdrawn, the abdominal wound was closed. The patient made a good recovery from the operation. Mr. Tait does all his operations under the spray of *aqua pura*. He is a strong opponent of Listerism. At the Birmingham Hospital for Women, Mr. Tait operates with but one assistant, who possesses the rare quality of using his fingers dexterously, keeping his eyes open, and—his mouth shut. The anæsthetic (sulphuric ether) is always given by Sister ——, a bright-eyed, intelligent, active little sylph, who keeps the patient nicely anæsthetized from the beginning to the end of the operation. In fact, it is quite a treat to witness the anæsthetizing of a patient by Sister ——, after having seen that operation performed by certain individuals (of the masculine gender) in London, who are supposed to make their living by deadening other people's sensibilities, and are pleased to call themselves "*specialists*." As regards the method of dealing with the pedicle, in ovariotomy, Mr. Tait has, for many years, been an ardent advocate of the intra-peritoneal method. At St. Bartholomew's Hospital, London, the ovariotomies are performed by Mr. Willett. The operations are done in a small amphitheatre (generally used by Dr. Matthews Duncan as a clinical lecture room) on the top floor; and the number of spectators is limited only by the size of the room. Students engaged in dissecting or making post-mortem examinations are invited—to be absent. All Mr. Willett's ovariotomies are done under the carbolic acid spray and Lister's dressing is applied to the wound. The intra-peritoneal method of dealing with the pedicle is always adopted.† After the operation the patient is conveyed to a small, special ward, containing three beds, adjoining the operating-room. She remains in this ward during the after-treatment. The results obtained by Mr. Willett, as far as they go, are equally as good as those obtained by many surgeons in this country whose operations are performed in hospitals devoted exclusively to the treatment of diseases of women.

* The number of napkins introduced is noted, so that none of them may be left in the peritoneal cavity.

† If proof were wanting of the innocuousness of silk ligatures in the peritoneal cavity, Mr. Willett's practice would afford strong evidence in that direction. The silk which he uses to secure the pedicles is almost as thick as whipcord, and yet the patients do not seem to suffer any inconvenience in consequence.

At King's College Hospital, London, the ovariotomies are performed by Mr. John Wood. To say that Mr. Wood's ovariotomies are done with the neatness, dexterity, and skill which characterize that distinguished surgeon in the performance of all other surgical operations, would be to state what is not true. All Mr. Wood's ovariotomies are done antiseptically.

At the Hospital for Women, Soho Square, London, the ovariotomies are done by Dr. Carter and Dr. Heywood Smith. Considering that this is the oldest, and probably the largest special hospital for women in the United Kingdom, the number of ovariotomies annually performed there is comparatively small. The operations are supposed to be done antiseptically, but it is not an unusual thing to see the silk which is used to ligate the pedicle hanging on a string behind the operator, who proceeds to use it without even dipping it in the antiseptic solution. In the mind's eye one sees *millions* of bacteria, which have been roosting on the silk, thus carried into the vulnerable peritoneal cavity of the patient. However, either from insusceptibility to the deleterious influence of bacteria, or from some other unexplained cause, the patients recover in a very large proportion of the cases.

At the Samaritan Hospital for Women, more ovariotomies are performed annually than in all the other London hospitals put together. The surgeons are Dr. George Granville Bantock and Mr. J. Knowlsley Thornton.

Mr. Thornton is a straightforward, orthodox, antiseptic ritualist; while Dr. Bantock is decidedly heterodox, so far as the Listerian doctrine is concerned. It is evident from Dr. Bantock's practice that he believes that "cleanliness is next to godliness;" but he evidently does not think that carbolic acid is essential to the process of purification, or to the salvation of the patient. To an unprejudiced observer there is much to interest and instruct in the practice of these two gentlemen, holding, as they do, opposite views as to the value of antiseptics in ovariotomy. As before stated, Mr. Thornton is a faithful disciple of Mr. Lister, and does all his operations strictly antiseptically; and so strong is his faith in antiseptics, that if he is so unfortunate as to lose a patient from septicæmia, after an ovariotomy performed antiseptically, he attributes the bad result to a failure on his part to carry out all the details of the method.

Dr. Bantock, on the other hand, maintains that carbolic acid not only does no good, but that it does harm. He holds that *hyperpyrexia* is much more common after Listerian ovariotomy, than after ovariotomy performed under what he terms modified Listerism.*

He also holds that there is danger of carbolic acid poisoning in cases in which the peritoneum is exposed for a considerable length of time to the spray of the ordinary solution. He thinks that there is danger, in a prolonged operation, from the chilling of the peritoneum by the spray, especially when the apparatus is placed (as it generally is) at the foot of the patient, and the spray directed *into*, as well as over, the abdominal incision.†

There is one point, however, on which Dr. Bantock and Mr. Thornton agree, viz., the *necessity* of *perfect cleanliness*. Their sponges are always beautifully clean and white. They are careful to have their own hands and those of their assistants and nurses thoroughly clean, and just before the operation the operator and his assistant bathe their hands and arms in a warm solution of thymol or carbolic acid, the strength of the solution varying with the *idiosyncrasy* of the operator. A basin, containing a warm solution of thymol or carbolic acid, is placed in a convenient position, so that, during the operation, the operator may cleanse his hands of blood or ovarian fluid, previously to putting them into the peritoneal cavity. Both of these operators are careful to thoroughly cleanse the peritoneal cavity before closing the abdominal wound; and they both treat the pedicle by the intra-peritoneal method. Mr. Thornton uses silk sutures to close the abdominal wound, but Dr. Bantock uses silk-worm-gut. Mr. Thornton dispenses with the "protective," and uses as a substitute a piece of thymolized gauze, wrung out of a five per cent. solution of thymol, and over this he places the ordinary Lister's dressing. A layer of cotton-wool is placed over the dressing, a folded towel is placed over the hypogastrium, and the whole is retained in place by strips of adhesive plaster and a bandage.*

Dr. Bantock's dressing is more simple: a few strips of dry thymol-gauze are placed over the wound, and over this a pad made of absorbent cotton wrapped in fine gauze. This dressing is kept in place by a many-tailed flannel bandage. In ordinary cases, the dressing is left undisturbed for ten days, when the wound is generally found completely united. In cases in which extensive adhesions have existed, and in which a good deal of oozing of bloody serum continues, even after the peritoneal cavity has been thoroughly cleansed, Dr. Bantock uses a glass drainage-tube, so as to provide an exit for this fluid. Mr. Thornton, however, does not consider this necessary. He believes that, if the fluid is *aseptic*, it will do no harm, but, on the contrary, by its reabsorption will tend to nourish the patient.†

As an anæsthetic, Dr. Bantock uses chloroform. Mr. Thornton uses bichloride of methylene. In the after-treatment of their cases there is but little difference in the practice of these two surgeons. For the first twelve hours nothing is given but a sip of *hot* water, from time to time, to relieve thirst. After the first twelve hours, if there is no nausea, small quantities of barley-water are given at regular intervals. After the expiration of twenty-four hours a mixture of milk and barley-water in equal proportions is substituted for the plain barley-water. On the third day a little tea and toast is allowed; on the fifth, a little fish; and gradually, as convalescence progresses, a more generous diet is permitted. Opium is only given when there is pain. The preparation which is generally used is the tincture, and it is always given per rectum. On the sixth or seventh day a cathartic is administered, and its operation is assisted, if the rectum is loaded with fæces, by an enema. The stitches in the abdominal wound are generally removed on the tenth day.

A description of the ovariotomists of London

* If my readers would like an explanation of the meaning of the term "modified Listerism," I may say that it consists in substituting a weak solution (from one-half to one per cent.) of carbolic acid for the strong, five per cent. solution used by Mr. Lister and his followers.

† Dr. Bantock adopts Dr. Keith's plan, and places the spray apparatus at the head of the patient.

* Mr. Thornton gives as a reason for not using the protective, that the peritoneal surfaces of the wound are sealed in a few hours after the operation, and, therefore, the protective is useless.

† I leave my readers to draw their own conclusions as to the relative merits of these two opposite lines of practice. My own opinion in regard to the matter is very decided, and, at some future time, I may feel that I am at liberty to express it; but, at present, "*Je raconte, je ne juge pas.*"

without a reference to Mr. T. Spencer Wells would be like the play of "Hamlet" with Hamlet left out. Mr. Wells now only operates in private, having given up his connection with the Samaritan Hospital, except as consulting surgeon, some five years since. Mr. Wells operates under the thymol spray, and uses the antiseptic dressing, kept in place by strips of adhesive plaster. As an anæsthetic Mr. Wells prefers bichloride of methylene. There is nothing in Mr. Wells' method of operating which requires special description. It is not what one sees at an operation by Mr. Wells that makes an impression; it is the consciousness of standing in the presence of a man who has done more ovariotomies than any other surgeon, living or dead—a man with an experience of *over a thousand* ovariotomies stored away in the cells of the gray matter of his cerebral convolutions, ready to be called forth at an instant's warning in the event of an unforeseen complication.

Last, but by no means least, comes Dr. Thomas Keith, of Edinburgh. The description of Dr. Keith, and his method of operating, given by Dr. J. Marion Sims in a paper entitled "Thomas Keith and Ovariotomy," and published in the number of the *American Journal of Obstetrics* for April, 1880, is so clear and accurate that I have nothing to add to it, and nothing to subtract from it. I shall never forget the impression made on me by Dr. Keith; so quiet, modest, and unassuming, that I forgot I was in the presence of the *most successful ovariotomist in the world*. After describing Dr. Keith and his method of operating, Dr. Sims says: "I regret to say that his health is not good, and that he is often compelled to leave his hard work and the rigorous climate of Edinburgh, and seek recreation in the more congenial climate of the South of France." He then adds, "Let us all hope that the life of this great and good man may long be spared to relieve suffering humanity, and to further advance the progress of our science for which he has already achieved such wonders."

To this prayer of the great American gynecologist, as a slight tribute of respect and affection to the great, the good, the noble Thomas Keith, may I be allowed to add a fervent Amen!

[NOTE.—Since the above article was written I have received a letter from Dr. Bantock, in which he informs me that he has entirely abandoned the use of the spray; and I am informed that Dr. Keith has done likewise.] G. H. BALLERAY, M.D.

PATERSON, N. J.

THE METHODS OF VACCINATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dr. J. B. Taylor, Inspector of Vaccination to the Health Department of this city, declares that "the reason why physicians are not so successful with bovine as with humanized lymph is not entirely due to the inefficiency of the virus, but partly, also, to the wrong method of the physician in using it."

Drs. Henry A. and Stephen C. Martin, of Boston, the pioneer cultivators of the bovine virus in this country, write:

". . . . Others (generally elderly physicians, who often seem to feel insulted at any attempt at instruction), whose returned points indicate an utter failure to dissolve virus, are continually reporting ill success, and it is to be feared always *will*. They cannot perceive that the fault is not in the virus, but in the men who use it, and the manner in which it is used."

With the laudable intention of enlightening the ignorance of the average practitioner, "elderly" or otherwise, both these specialists proceed to give us definite rules for the proper employment of the bovine virus, from which I extract the following:

"To secure the best results from the bovine virus, the arm must be scarified, and *not* denuded. . . . . Enough blood should be drawn to well moisten the quill, in order to dissolve the virus and render it capable of absorption. Water should never be used for this purpose."

Dr. Taylor's success by this method in primary vaccinations is stated to be 82.66—94 per cent., but "it is not claimed that, even in the hands of experts, bovine virus is quite as uniformly reliable as humanized." (!)

On the other hand the Drs. Martin say:

"The incisions should be so slight as barely to result in the faintest possible exudation of blood, and *that* only after the lapse of a second or two. . . . . The best mode of dissolving the dried albumen and virus on the point is by slightly wetting a part of it with the point of a *clean* finger, dipped in cold or tepid water, then with the flat of the *clean* lancet, or of another *clean* ivory point, rub up the water with the dried virus till, partly mechanically and partly by solution, a mucilaginous mixture is obtained."

Their success is still more enviable, for

"When proper care is taken, *invariable* success follows the use of good fresh cowpox virus in primary vaccination."

Now, unless there is a physiological difference between New York and Boston heifers, *one* of these "experts" has yet to learn the proper method of using the bovine virus.

I may add that, in recent years, my own success in primary vaccination with the bovine virus has been (pardon the hibernianism!) about 75 per cent. of failures. Possibly I may have confounded the rules of the eminent "experts" quoted, and used New York virus under Boston rules, or *vice versa*. But, in all seriousness, Mr. Editor, does not the wonderful success attained by the authors of these two contradictory rules lead to the fair inference that the ill success of the profession generally, in the use of bovine virus, is due more to the inefficiency of the virus employed, than to the *method* of vaccination?

A DISGUSTED VACCINATOR.

WAS IT CURED BY CALCIUM SULPHIDE?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the spring of 1880 an intelligent Frenchman near this post took me to see a middle aged woman, his Mexican mother-in-law, whom I found suffering from extensive suppuration in the left arm, chiefly from its middle down to the elbow, with a history of continuous trouble extending back at least five years, and formerly involving the soft parts over the scapula and shoulder. There were now numerous sinuses and openings discharging pus, and the woman was reduced to skeleton proportions, except at the swollen arm; she presented a cachectic appearance, and apparently was a promising candidate for an early interment. I suspected periostitis and perhaps much destruction of bone, but having no probe at hand I did not explore further, only making an appointment with the woman to meet me at the Post Hospital later, if she was able to travel, where I proposed to probe the sinuses in

detail and perhaps cut down to the bone, etc. Meanwhile, with a semi-placeboic intent, and partially as a possible check to the extensive tendency to pus formation, I ordered the woman one quarter of a grain of calcium sulphide three times daily, giving her one hundred of Allaire, Woodward & Co.'s pills, which I had just received by mail.

I heard later that the woman was better—even well, but was rather skeptical about it, and the hospital appointment was left unkept.

A few weeks ago this woman came to me to have her grandchildren vaccinated, and she assured me that she had made an immediate and complete recovery shortly after my single visit to her two years ago, that she had taken the pills faithfully and no other treatment whatever. She is now a blooming, hearty, well-nourished woman, without a trace of ill-health, and she and her son-in-law attribute this happy change wholly to the influence of those calcium sulphide pills. My inference now is that the bone was not affected, possibly not even the periosteum, but that a chronic suppurative tendency existed involving only the soft parts.

I may add that, of course, being an ignorant Mexican among Mexicans, not the slightest aid was likely to be rendered by the ordinary dietetic or other hygienic measures people of more intelligent races would have resorted to.

When I asked if the woman had had syphilis the Frenchman responded that she was a Mexican, and that I knew what the chances therefore were in favor of that taint, but there was no direct evidence.

FRANCIS H. ATKINS,
A. A. Surgeon, U. S. Army.
FORT STANTON, NEW MEXICO.

THE HIGHER MEDICAL EDUCATION.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR DOCTOR: The recent deliverance of the Philosophical Faculty of the University of Berlin will help us to reach a correct conclusion as to the value of the higher education to the prospective student of medicine, and to all is an impregnable defence of classical studies. The paper was signed by all the members of the scientific, as well as by all those of the classical Faculty.

By the decree of December 7, 1870, students of the real or scientific school were admitted to the University to study mathematics, natural history, and modern languages. Before this time none were admitted but those who had passed through the gymnasia or classical schools. We are not surprised that the faculty expressed unanimously their views of the value of the study of the ancient languages. By a trial of more than ten years they reached the conclusion recently published. The advocates of the scientific course, in opposition to the classical, tell us of the superiority of the former over the latter. Our German friends testify that a primary classical training gives the subject of it great advantage over the student who has pursued the course in science to the neglect of classical study.

The professor of chemistry says, "That students from the scientific schools cannot in this branch of study be placed upon the same plane with the students of the gymnasia."

Professor Hoffman observes, "That the matriculates from the non-classical schools often show, at the beginning of their chemical studies in the University, a more rapid progress, in acquiring a knowledge of the elementary principles of the science, as well as a greater dexterity in the early practice of chemical manipulation; but that before their studies have advanced very far, these relations are reversed and the non-classical students are left behind."

Professor Rammelsberg gives similar testimony in regard to students in the school of technology. He remarks, "That of those who take his lectures on chemistry during the first semester, the students trained in the gymnasia, though without any previous knowledge of the subject, take a far greater interest in the instruction than that shown by the students from the non-classical schools. At the final examinations the work of the non-classical students is generally inferior to what in advance would be expected, while the work of the classical students is almost invariably better."

Zupatza, the professor of English, says: "That the attainment of the non-classical student is greatly inferior; and what is of still greater importance, they almost invariably show a want of keenness of apprehension and independence of judgment that prevents them from taking any other than a prescribed method." He also testifies, "That, as a member of the Examining Committee of the Government, he has noticed that, although the students prepared in the scientific schools begin their studies of English before they go to the University, their knowledge of the language at the completion of their University course is generally much inferior to the knowledge shown by the classical students."

Herr Müllenhoff, one of the professors of the German language and literature, uses these expressive words: "According to my experience, it is hopelessly impossible for a student, prepared in a scientific school, to acquire what may be called a thoroughly satisfactory development. No one ever acquires it through the study of the modern languages, no one ever will without the solid foundation of a training in a gymnasium."

The professors of mathematics who teach the more elementary branches, and whose lecture-rooms are therefore generally sought by students during the first year of residence at the University, testify that they have discovered no important difference between the two classes of students. But, on the other hand, both of the professors who give instruction in the mathematics of a more advanced grade certify that the students who have received their preliminary training in the classical schools, although less advanced at the beginning, show a clearer insight into the subtleties of the more abstruse mathematical relations; and, before they have gone very far, leave the non-classical students quite in the rear."

The testimony of the professor of astronomy is of the same import. Both in the Observatory and in the Bureau of Weights and Measures he has noticed a marked distinction between the two classes of students. He has observed that the development of the non-classical students is slower, more superficial, and less independent, while they show still greater inferiority in point of ability to carry on the more difficult processes of independent research.

"It is the opinion of the Faculty that, unless the prevailing tendency is arrested, the inevitable result will be that the superior excellence of scholarship, which for half a century has made the German universities famous all over the world, will be a thing of the past."

We have in this paper of the Berlin Faculty the clearest testimony as to the course to be pursued by

those who would profitably pursue the study of medicine. The professors of the Berlin University are competent to observe, and they have for more than ten years given attention to the progress made by those who have pursued the scientific course as a means of mental discipline. Some of the studies are those which belong to the medical course, and all are closely allied to them, and the scientific students failed remarkably in these studies. May we not say, then, that the degree of B. S., or M. S., or Ph. D., do not with us indicate qualifications equal to those belonging to the degrees of A.B. and A.M. any more than the certificates held by the students of the scientific schools of Germany?

An abstract of the report of the Faculty of the University of Berlin was published in the *Nation*, December 22, 1881, and in other places; but we fear it has not reached as many of the members of the medical profession as could be desired. We think so much of it as prepared above will prove of advantage to the readers of THE MEDICAL RECORD. We do not suppose that any of our teachers, private or public, will say that their experience differs from that of the Berlin professors. The proverbial dread which so many medical students have of chemistry and some other studies in the curricula of our medical schools, is easily accounted for in the light which has come to us from Berlin. Further, if this is the condition of the students of the scientific schools of Germany, may we not ask what is the condition of a large portion of our medical students who have not any scientific or literary training?

The Berlin teachers are not alone in this testimony. Professor Liebig some years before his death stated that he frequently observed among his own students in chemistry, that although those coming from technical schools appeared at first, in all that related to natural science, as giants compared to those having received a chiefly classical education, yet that the latter, in most cases, not only soon made up their deficiencies in this respect, but in the end generally outstripped their technically educated rivals.

Did space permit, abundance of like testimony could be furnished from teachers in Europe and our own country.

Very truly yours,

TRAILL GREEN.

NORTHWESTERN DISPENSARY.—The twenty-ninth annual report of the Northwestern Dispensary announces the largest work for 1881 of any year since its establishment.

Twenty-five thousand and five hundred (25,500) persons were treated, being an increase of nearly twenty-one hundred (2,100) over the number for 1880. The increase in the last decade in the special classes for diseases of the eye and ear and skin has been remarkable.

In 1870 there were treated in the eye and ear department 439 cases; in 1881, 1,483 cases, an increase of over 300 per cent.; in 1870 there were treated in the class for surgical and skin diseases, 1,685 cases; while in 1881, the surgical class treated 2,322 cases, and the class for skin diseases 1,323 cases, the classes having been separated a few years ago. All these classes have been attended by the same gentlemen for a number of years.

The private donations for 1881 amount to $2,806, while the city gift was $1,000.

Obituary.

JAMES RUSHMORE WOOD, M. D., LL.D.,

NEW YORK.

THIS journal had already passed the printer's hand, when the unexpected death of this eminent surgeon was announced by the secular press. Probably no event partook more of the character of a startling bereavement, inasmuch as the fact of his illness was not generally known.

Dr. Wood, whose father was a trader in moderate circumstances, was born in Frankfort Street, this city, September 14, 1816, and in his early life struggled hard against adverse circumstances and the disadvantages of interrupted opportunities for a much-desired education. However, he profited not a little by his training in the "Friends' Seminary," an excellent and popular institution of the denomination to which his parents belonged. After attending a preliminary course of lectures, the future surgeon, whose name was to add lustre to his native city, already past his majority, entered the office of Dr. Tulley, of New Haven, Conn. Returning to this city after a short term, he became a pupil of Dr. David L. Rogers, then a lecturer in the College of Physicians and Surgeons. He subsequently graduated from the Castleton (Vt.) Medical College in 1846, and was at once appointed its Demonstrator in Anatomy by the late Professor Aldenmarch, of Albany. In 1847, during an epidemic of typhus fever, he first became identified with Bellevue Hospital, as an associate of Dr. Wilson, the resident physician, and at once began a crusade against abuses which had grown up under a corrupt political management. Lunatics, vagrants, criminals, and small-pox patients were then huddled together in badly ventilated apartments, while nurses without character were expected to maintain the necessary discipline. As the result of Dr. Wood's aggressive movement, the office of resident physician was abolished in 1849, and the medical management of the institution was vested in a corps of visiting physicians and surgeons, to whom the house staff were responsible, and who could be appointed only on recommendation of this medical board. Within three years the statistics of the hospital showed an annual reduction of mortality equivalent to the saving of six hundred lives per year. In recognition of these services, but more particularly for his zeal and courage during the typhus fever epidemic, when the grounds about the hospital were crowded with tents containing the afflicted, Dr. Wood's services were so highly appreciated that the Alms-house Commissioners offered him a special remuneration. This, in a monetary way, he declined, but asked and received permission to make all autopsies ordered by them. While thus actively engaged in pathological investigation, he conceived the idea of what is known as the Anatomical or dissecting bill, which after a struggle of three or four years in the House and Senate, finally became a law by a majority of one. The substance of the bill was that all vagrants dying unclaimed, and known by public authorities to be such, and without friends, are to be given to the institutions in which medicine and surgery are taught, for dissection, the *débris* to be buried in the public cemetery. The clause which rescued the bill was "Any unknown person found dead shall be buried." It is but just, however, that the names of Professor

Willard Parker and the late Dr. Alexander F. Vache, and Professor Martyn Paine should also be mentioned in connection with this valuable boon to the profession. Previous to the passage of this statute *materiel* was obtained by students or professional "body-snatchers" from the Potter's Field, or other burial places as could be successfully raided. In October, 1856, Dr. Wood established the Saturday surgical clinics, which became a feature of Bellevue Hospital, and which he continued down to the last Saturday of his life. To these clinics were welcomed both students and practitioners; such of the operations as could be reserved until that day were then performed by him, with descriptions of methods and explanation of pathological points. It was mainly by these that he gained the title of "the Student's Friend."

The profession honored the subject of this sketch with many positions in recognition of his merits. He was twice elected President of the Pathological Society, and was, at the time of his death, Consulting Surgeon to Charity, Woman's, St. Vincent's, Ruptured and Crippled Hospitals, still retaining his favorite position on the Visiting Staff of Bellevue Hospital. His honorary membership in medical societies outside of the State were to be counted by scores, as might be expected in so busy a man. Dr. Wood contributed but little to the medical literature of the day, and that mainly in pamphlet form—the titles of such as were published are: "Removal of the Entire Lower Jaw," "Ligature of External Iliac Artery," "Spontaneous Dislocation of the Head of the Femur into the Ischiatic Notch occurring in Morbid Coxarius," and "Early History of the Operation of Ligature of the Primitive Carotid Artery," which last is a compendium of rare interest.

The long-cherished idea of a medical college as an outgrowth of the hospital, suggested by the success of the Saturday afternoon clinics, culminated, in 1861, in the present Bellevue Hospital Medical College, and may be said to have combined the bedside with the didactic method of instruction. The collection of anatomical, surgical, pathological, and histological specimens, reputed to be the most valuable on this continent, was, not over a year ago, given to the city on condition of its care and perpetuation. In it is comprised unique and exquisite prize dissections, duly described and catalogued. As a surgeon, Professor Wood was bold, rapid, and anatomically sure—eminently judicious and successful. His fame gave him easy access to the medical centres of such cities of Europe as he had visited. He gained no little *eclat* at one of the International Medical Expositions in the old world by the exhibition of a skull demonstrating the reproduction of bone from the periosteum. This specimen, so well known to the profession, and occupying a conspicuous place in the museum, shows a second jaw formed after the removal of the first for phosphor-necrosis. His mode of operating was very simple, and consisted merely of the careful separation, in sections, at different times, of the necrosed bone from its membranous tunic by enucleation, after which the membrane was replaced in position, incisions were closed, and the proper dressing applied. On this operation it was his wont to dilate with a pardonable pride.

As a man, Dr. Wood exerted a magnetic influence, being genial, considerate, and scrupulous regarding the reputation of every member of the profession. To merit he ever extended a helping hand. Young men speak always of him with gratitude. By the general public he was known by a sobriquet which designated at once his stature and slender physique—this came to be a synonym for enterprise, courage, and persistency. At length the spirit which betrayed him into the belief, as he more than once expressed it, "that there was, at least, ten more years of work in him yet," succumbed to its overtaxed energies, most men believing his age to have been greater from the work already done. He died on the 4th instant, of pneumonia, despite the best efforts of his friends, Professors Alonzo Clark and Austin Flint; he breathed his last so peacefully that, in the words of a physician who was with him during his last moments, one could not tell where life ended and death began.

Few there are in this city who knew him not—many who never saw him exclaim, "Alas, my brother!"

JOHN T. HODGEN, M.D.,

ST. LOUIS, MO.

On April 29th, after an illness of only twenty-four hours, Professor John T. Hodgen, M.D., passed away. He had been giving expert testimony in the courts on the day before, and had asked to be excused from completing his evidence because of the "intense agony and torture" he was undergoing. When he reached his home he could not walk, but crawled upstairs upon his hands and knees. Summoning his colleagues, Baumgarten, E. F. Smith, I. B. Johnson, and E. H. Gregory, to his bedside, he told them to save him, if possible, but that he felt his end was near. He died next morning, and a post-mortem revealed erosion and perforation of the gall-bladder, which produced the fatal shock and peritonitis. Professor Hodgen journeyed to the Shadowland as he had walked the earth—calm, heroic, peaceful, and with dignity.

The suddenness of his demise paralyzed his brother-physicians with grief, and no man's taking-off ever created profounder sorrow in the city of St. Louis.

Born among the prairies of Illinois, where the simplicity of almost pioneer life, and the known poverty of a ministerial career, precluded his father from giving him the advantages of any early education, after the rude hardships of a Western farmer's occupations, John T. Hodgen, in 1844, when but twenty years old, determined to study medicine. His earnest positiveness and quiet dignity soon made him the leader of his classmates (a position he ever occupied among men), so that, when he graduated, he was appointed prosector to the Chair of Surgery in the Missouri Medical College, under the late brilliant, but eccentric, Prof. Joseph Nash McDowell. A journey to California interrupted this association for a couple of years, but upon his return to St. Louis, in 1850, he was made Demonstrator of Anatomy, then, in 1852, Professor of Anatomy also, which he held until 1861, when he accepted the same chair in the St. Louis Medical College. In 1872 he was appointed Professor of Clinical and Military Surgery, and held this chair until his death.

Professor Hodgen was particularly known for his wonderful readiness and adaptiveness in emergency. His surgical career was eminently practical. He was too busy as a teacher and practitioner to be an author, although he made most valuable contributions to current literature on fractures, amputations, hospitals, and sanitary science. His last literary

effort was published in the *North American Review*, on President Garfield's case.

As a man he was exemplary, earnest, silent, thoughtful, courageous, and true; as a friend he was steadfast, loyal, unswerving, and affectionate. One who knew him intimately for nearly thirty years—one who had been associated with him in very many operations—says of him:

"As a surgeon proper he was almost without a peer in the land, and he stood unrivalled with those who knew his excellence and readiness. Had his lines been cast in London, instead of the wild woods of the young West, he would have carved a reputation in men's estimation equal to Sir Astley Cooper's or Sir Benjamin Brodie's. Had he lived under the shadow of the Parisian school he would have stood alongside Dupuytren, Velpeau, or Nélaton. . . . As my friend I weep for him; as my brother physician I mourn for him. I drop the immortelle wreath upon his grave, and I feel that mankind is honored, humanity blessed, and the world benefited by the example of so grand and noble a character as John T. Hodgen's. . . . Great statesmen, brilliant orators, dashing generals, mitred bishops, learned judges, wise lawyers, and good physicians stand on the misty shore to welcome him. In all that silent throng no greater soul, no kinder heart, no gentler disposition is to be recalled than John T. Hodgen's."

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 30, 1882, *to May* 6, 1882.

Williams, John W., Major and Surgeon. Granted leave of absence for six months. S. O. 101, A. G. O., May 2, 1882.

Cowdrey, S. G., Capt. and Asst. Surgeon. Now awaiting orders, to report to Commanding General, Dept. of the East, for assignment to duty at Fort Monroe, Va. S. O. 103, A. G. O., May 4, 1882.

Hoff, J. V. R., Capt. and Asst. Surgeon. To be relieved from duty in Dept. of the East, and report in person to Commanding General, Dept. of California, for assignment to duty. S. O. 103, C. S., A. G. O.

Porter, Joseph Y., Capt. and Asst. Surgeon. The extension of his leave of absence granted him in S. O. 17, C. S., Mil. Div. of the Atlantic, is further extended twenty days. S. O. 99, A. G. O., April 29, 1882.

Carter, E. C., First Lieut. and Asst. Surgeon. To be relieved from duty in Dept. of California, and report in person to Commanding General, Dept. of Arizona, for assignment to duty. S. O. 103, C. S., A. G. O.

Raymond, H. L., First Lieut. and Asst. Surgeon. To be relieved from duty in Dept. of California, and report in person to Commanding General, Dept. of Arizona, for assignment to duty. S. O. 103, C. S., A. G. O.

Bellevue Hospital Medical College.—Dr. F. H. Bosworth has been made Professor of Diseases of the Throat, and Dr. Beverly Robinson Professor of Clinical Medicine, in this institution.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 6, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
April 29, 1882.	4	9	201	3	137	81	14	0
May 6, 1882.	19	8	181	6	145	78	19	0

Fuller's Tablets.—Dr. H. Lyle Smith, of Hudson, N. Y., writes: "In The Medical Record, April 29, 1882, p. 469, my attention was called to the use of 'Fuller's Tablets' for hypodermic injection. As you are aware, since 1878 I have made my own tablets and am constantly using them. I have made and used thousands upon thousands, both per orem and hypodermically. Since 1878 I do not believe that I have given a hypodermic injection of morphia, except in the shape of a Fuller tablet, and I use my syringe daily. During all this time I have never had the least trouble, *never an abscess*, nor any local or constitutional trouble from them. For the last two years I have made *all* my tablets from cane sugar. I buy the *frosting* sugar of the confectioners, and like it better than the sugar of milk; its solubility is far greater. Cane sugar used hypodermically *never* produces the *least irritation*. I have seen Wyeth's little tablets, but in solubility they bear no comparison to Fuller's."

Dr. J. Marion Sims.—The profession of this country will be glad to learn that Dr. Sims has been restored to health, and is on his way from Paris to this city.

State Medical Society of Wisconsin held its annual session for 1882, at Mineral Point, May 2d.

The late Dr. Erskine Mason.—The Executive Committee of the Board of Trustees of the American Veterinary College issued the following preamble and resolutions upon the death of Prof. Erskine Mason, A.M., M.D.

Whereas, By the death of Prof. Erskine Mason, A.M., M.D., the Board of Trustees of the American Veterinary College have to mourn the loss of an associate trustee, but just re-elected to his second term of office; therefore,

Resolved, First, that by his death we lose the co-operation of one whom we have learned by long association to regard as a large-hearted, liberal-minded, and conscientious man.

Resolved, Second, that as citizens we feel that the community has lost one whose sterling integrity, faithful discharge of duty, and professional ability had rendered his life an ornament to his profession.

Resolved, Third, that we tender to his bereaved family our sincere sympathy in their affliction.

Resolved, Fourth, that the American Veterinary College be closed on the day of the funeral, and the Trustees and Faculty of the College attend the same.

Resolved, Fifth, that a copy of these resolutions be forwarded to the family of our deceased fellow-trustee, and that the same be printed in the New York MEDICAL RECORD and *American Veterinary Review*.

By order of the Executive Committee.

SAMUEL MARSH, Esq.,
President of the Board of Trustees.
FANEUIL D. WEISSE, M.D.
DANIEL M. STIMSON, M.D.
HAMILTON BUSBEY, Esq.

Whereas, It has pleased God in his Providence to remove from amongst us our late friend and associate, Dr. Erskine Mason; and

Whereas, This Board has for many successive years profited by his advice and counsel;

Resolved, That the Board of Trustees of the Physicians' Mutual Aid Association hereby records its sorrow at his untimely death, in the midst of a useful and honorable career, in a profession to which he had devoted the best years of his life with earnestness and fidelity;

Resolved, That by his death this Board loses a member who was always prompt and faithful in his attention to his duties, fully sensible of the trust committed to him, and watchful in guarding the interests of the association, kind and courteous to his fellow members, considerate of the claims of the needy, and wise in his suggestions for their relief;

Resolved, That this faithfulness which he showed as a trustee was carried into all the associations of his medical life, with the same zeal and conscientious devotion to whatever he undertook, giving us all an example worthy of imitation;

Resolved, That these resolutions be inserted in the medical journals, and a copy of them transmitted to his bereaved family, with the sincere sympathy of the Board.

GEORGE A. PETERS,
GEORGE G. WHEELOCK,
DANIEL LEWIS,
Committee.

VILLAGE DOCTORS.—A correspondent of the *British Medical Journal* defends the country doctors. He says: "Is it remarkable (as has been alleged) that a village doctor should have arrived in 1840 at these conclusions, which anticipate some of our most recent teachings. Will he inform us why it is remarkable that a village doctor should have advanced and independent views on medicine? Have not the village doctors frequently and strikingly shown that medical intelligence and knowledge is not to be measured by the population with which it is surrounded? Village doctors want to throw aside the superstitious respect shown to town doctors, and hold to and record the results of their own observation and thought, however divergent from the teachings of town doctors; and much useful knowledge would be recorded, and its value, years afterward, accepted by the town doctors who assume the position of teachers."

THE EFFECTS OF MEDICINES IN SMALL DOSES.—It has for some time now become a recognized principle in therapeutics that many drugs have an effect, when given in minute doses, quite different from the ordinary massive dose.

Dr. Ide has recently contributed some observations in this branch of therapeutics to the *Allgemeine medicinische Central-Zeitung*. The first series of facts relate to arsenic in diarrhœa and in ulcers. In the case of an infant aged five months, with entero-colitis, two drops of Fowler's solution were added to 75 grammes (℥ ijss.) of water, and a teaspoonful ordered every two or three hours.

The next day the child was better, but showing the effects of the arsenic in œdema of the eyelids and reddened conjunctiva. In four days recovery had taken place. This use of arsenic in diarrhœa and dysentery is not a new one, but is hardly applied so often as it might be.

In cases of old leg ulcers which are painful and obstinate, Dr. Ide reports good results as regards relief of pain. Thus, he gave an old woman with a chronic leg ulcer a teaspoonful of a mixture containing three drops of Fowler's solution in 100 grammes of water, the dose being repeated thrice daily. Local applications of carbolized oil were also ordered. Relief from severe night-pains was immediate.

Tartar emetic in doses of about $\frac{1}{20}$ of a grain relieved a case of hay fever.

Two cases are cited which the author thinks show the usefulness of silica in the third trituration, in cases of injured joints or ununited fractures.

The occasional usefulness of tinct. cantharides in doses of a fraction of a drop, for hæmaturia, etc., is well known. Dr. Ide cites a case in illustration. Calomel and corrosive sublimate have been used in diarrhœas and dysenteries in our hospitals, and are recommended by Ringer. In a case of dysentery, $\frac{1}{8}$ of a grain of corrosive sublimate was given every two hours, with the most marked improvement within twenty-four hours; other and similar cases are given.

A case of stomatitis, in which improvement followed the use of mercur. solut. Hahn. triturat. iii., gr. ij., q. 3 h., after other treatment failed, is thought to illustrate the peculiar power of mercury in small doses. In another case a dilute solution (℥ j. to ℥ j.) of nitric acid was strongly healing.

The powers of pulsatilla were shown in a case of obstinate trigeminal neuralgia, which quickly yielded to that drug given in doses of about half a drop of the third dilution every three hours.

A SOCIETY FOR NEWLY BORN INFANTS has recently been organized in Paris. One great object of the society is to prevent infanticide. It has a "House for Newly Born Infants," where this class is received and brought up gratis until they are three years old. Mothers are encouraged to visit their children here. Unfortunate mothers will be helped in securing employment.

UTILIZING THE BRAIN OF THE CAT FOR ANATOMICAL STUDY.—The difficulty of procuring the human brain in a sufficiently fresh state for the observation of the finer details of even microscopic anatomy is well known. Professor Wilder, of Cornell University, has recently published a monograph on "The Brain of the Cat," and, by the aid of elaborate lithographic plates, has given a very good idea of how much may be learned from the encephalic portion of this commonly despised animal. He has chosen the cat as being generally available [in countries where anatomy is "cultivated," and better than the dog on account of breed differences and a usually complex fissural pattern in the brain of the latter. Professor Wilder has added several new names to this already much-named organ. He has also proposed several changes in its existing nomenclature, some of

which will undoubtedly prove of value. We feel disposed to especially endorse his recommendation for the more general adoption of such terms as cephalic and caudal, dorsal and ventral, in place of superior, inferior, posterior, and anterior. The latter are often rendered ambiguous and confusing to the student on account of the natural difference in posture between man and other mammals, and the fact that the human cadaver is usually examined in a supine position. About one hundred and fifty named parts are shown in the plates. Many of these are pointed out by the author as subjects calling for special elucidation. The paper to which we have alluded is the first of a series on the same subject, promised by this indefatigable worker. It evidences his intention to give a thorough and comprehensive review of the brain of this representative mammal, not only as to its gross anatomy but also its histology, development, and taxonomic relations. The series, when completed, will serve the student as a valuable introduction to the study of the human encephalon.

Petroleum Pills in Phthisis.—Dr. M. Milton, of Branford, Pa., sends us the following clinical evidence of the value of petroleum in phthisis:

"Case I.—Mrs. M——, Irving, N. Y., German, widow, occupation housekeeper, aged thirty-seven; one sister died of consumption at the age of thirty-five; parents both dead, cause not known. This patient has had a cough for five or six years—she says 'it is a seven years cough'—much difficulty of breathing at times. Has been pronounced a consumptive by several physicians and given up as an incurable; had dyspepsia; much emaciated; spent whole nights often with the most racking cough I ever heard; expectoration profuse; suppression of the menses; cavernous respiration in apex of left lobe of the lung; has had several attacks of pneumonia. She came under my observation November, 1879. I placed her under the usual treatment of cod-liver oil, extract of malt, whiskey, etc. These apparently having no appreciable effect, I placed her on petroleum pills—at the suggestion of Dr. M. M. Griffith, then residing at Irving, N. Y.—one pill every three hours, or when the cough was troublesome, also as a tonic, elixir quinia, iron, and strychnia ter die. I have no record of pulse, temperature, etc. The cough was relieved, expectoration diminished, and the difficulty of breathing disappeared. She had comfortable night's sleep, which was rare before. The improvement was slow, but apparent. She occasionally had her old coughing spells, when she committed some indiscretion in diet or exposure to the weather. She was one of those cases whose house one would prefer to pass a dozen times rather than go in once, and rather go five miles around than pass the house—she was a regular termagant.

"I saw her last May. She was then under the care of Dr. Griffith, who reported that he had continued the treatment, only varying occasionally as indications required. She had gained in weight twenty-five or thirty pounds, was doing all her household labor, washing, etc., which she had not done for years. I think this may be called a case of 'consumption cured.' It had been pronounced so by my superiors in diagnosis, though lacking the evidence from neglect to take notes at the time."

"Case II.—November 19, 1879. Mr. B——, aged twenty-nine years, weighs 117 pounds; temperature, 99¼ F.; respiration, 24 per minute. Has a cough much increased upon exertion, and attributed to an attack of pneumonia two years ago. He has not been robust since. Nothing hereditary in family. Has been gradually losing flesh; night-sweats at intervals; no appetite; several hemorrhages during the last eight months.

"Slight dulness at apex of left lung, increase of vocal resonance, increased bronchial whisper, broncho-vesicular respiration over a circumscribed spot. Right lung sound.

"Placed upon pills of petroleum mass, combined with quinia and Dover's powders; one every three hours, or, as the cough was troublesome, also elixir quinia, iron, and strychnia ter in die. Did not see him again for three months. He had taken the pills faithfully, the elixir occasionally. I scarcely recognized him as the same person; he had gained thirty pounds; appetite good; no night-sweats, and to all appearance he was well. December 17, 1880.—He reports no return of his old troubles.

"Case III.—Mr. B——, residence Texas. Phthisis hereditary; weighs 145 pounds; color good; has nasal catarrh; respiration, 20 per minute; temperature normal; has had night-sweats occasionally, also hemorrhages; slight infiltration at upper lobe of right lung, about the size of a silver dollar; slight dulness over this spot; diminished respiratory murmur; mucous râles; crackling sound over the spot. Was placed upon the pills with my usual prescription—elixir quinia, iron, and strychnia. He has steadily improved, gradually gaining in weight and strength. He returned home in three months, and is reported by his physician in a fair state of health two years after he came under the treatment.

"Case IV.—Mrs. M——, residence Syracuse, N. Y. Has had several hemorrhages; phthisis hereditary in the family, two of the family having died of the disease; weighs 110 pounds. She is anæmic in appearance; no appetite. Has had a dry, tickling cough for six months; now raises a muco-purulent matter; has dyspeptic troubles; difficulty in breathing on exertion; bronchial breathing in a small area of left lung; slight involvement of the apex of right lung; some dulness, upon percussion, of the diseased lung; pulse, 105; temperature, 101½°. Was given my usual prescriptions, also to use a plaster of the same, to be used and worn on the lung.

"In one month much improved; appetite fair. Menses appeared, which had been suppressed for three months; cough and expectoration much less; no night-sweats; vesicular murmur in both lungs clear and distinct. This case is remarkable, showing the efficacy of the treatment when applied in the early stages."

A fourth case is related, but it seems to carry no evidence of the value of petroleum. Dr. Milton concludes with the following judicious summing-up of the question:

"My number of cases of well-marked phthisis have not been large, but the results have been above the average—forty-three cases during the last three years, with the following results: Apparently cured, 14; improved, 18; no improvement, 3; died, 5; no reports from 3. The apparently cured may at any day break forth with all the symptoms of the disease in its worst form. I am inclined to the belief that we are no nearer a cure for phthisis than ever before.

"In the above cases I did not rely on the remedies exclusively, but treated the symptoms as they arose; but they were continued, and only intermitted when other treatment was indicated. I never use cod-liver oil in phthisis, the petroleum fulfilling all indications for it."

Original Communications.

PYREXIA A CONSERVATIVE FORCE IN FEVER.*

By NELSON E. JONES, M.D.,

CIRCLEVILLE, OHIO.

This may seem a solecism. The difficulty in giving expression to the proposition in a few words leads to the adoption of the present heading. It expresses more directly what is really meant than to say "A conservative force in disease;" for the latter would make the subject more general than intended, as it would embrace all diseases, while the word "fever" is applied to a certain class of diseases, which collectively are known by the name of "fevers." The word "pyrexia" is employed in the ordinary sense —heat, rise of temperature, feverishness.

According to present pathology, increased temperature, or pyrexia, is a symptom of fever. Some make it a necessary symptom, and claim where it is absent fever does not exist. True, where there is no preternatural heat it may be said, technically, there is no fever; still, it cannot from this be logically asserted there is no disease, for grave forms of disease sometimes exist without fever, or even with a subnormal temperature. Also a high temperature may be present without fever or disease, and there may be fever or disease with a low temperature; there may be disease without fever, but not fever without disease. Therefore, "pyrexia," "fever" and "disease" are not exactly the representatives of the same idea, neither can they always be interchanged without a change of meaning; and confusion in representation is very often produced by applying entirely different meanings at different times to these substantives. Very frequently, indeed, both writers and speakers make temperature the synonym for "fever," and speak of the patient's having a great fever, a high fever, etc., upon the mere indication of a rise in the temperature point. And at another time no relation of these terms is made to exist, and the sick are described as having a low "fever," a malignant "fever," etc., with a normal or subnormal temperature. The first expression may be correct or may be incorrect, for temperature is a state, and fever, in the sense of pyrexia, is but the symptom of disease, while disease is an entity, a substance, a thing. Increased temperature, bodily heat, being but a symptom of fever, when "fever" is used in the sense of disease, it may, like other symptoms, be absent or may be present, and still the disease may be called a fever: "for circumstances may arise," says Virchow, "which shall make the presence of one or another symptom impossible." Webster defines "fever," "A diseased state of the system, marked by increased heat, accelerated pulse, and general derangement of the functions." Fever is termed a "diseased state of the system," and as such it is but reasonable to suppose it may be accompanied by all the usual symptoms or by only part of them; and this diseased state of the system may run its course with a low temperature, rapid pulse, and general derangement of the functions, or the reverse, and no one can predict, in an expected case of essential fever, which, if any, of the usual symptoms may be wanting; neither one nor any one is necessary to the fever. "A rise of temperature," says Senator, "is only one symptom, and does not constitute the essence of 'fever;' its explanation has not yet furnished any theory of fever, because underneath this symptom very different morbid processes are combined, and because there are in fever other important processes independent of temperature."

"Every one is sick," says Dr. Wagner, "whose temperature is not within the limits of health, even if he should feel subjectively well and healthy." "A normal temperature may exist in disease." . . . . "And the diagnostic value of the absolute height of a certain temperature by itself is very slight." . . . . "At all events, it has not yet been possible to demonstrate an exact relation between animal heat and tissue metamorphosis, and a conclusion cannot be drawn from the height of the temperature as to the severity of the fever nor the amount of heat production." Opinions differ in regard to the amount, if any, of increase in the production of heat in fever, and the presumption is that, if any increase exists, it is indeed very small. The correctness of this supposition, says Dr. Wagner, seems to be justified by the small, even to a certain extent doubtful, increase of the consumption in fever as compared with that in the fasting state. With the same degree of heat, the heat-production may be much or little, or not at all increased, in proportion to the amount of loss of heat, and for this reason the febrile-waste and the amount of febrile-products of decomposition may in one case be small, in the other large, and temperature manifestations may be principally a vaso-motor phenomenon, whether normal, supernormal or subnormal.

Leibermeister, the great philosopher in medicine, says: It is neither heat-production nor increased temperature, nor both together, that constitutes fever. The manifest heat is simply the regulation of the heat, the temperature point being fixed in fever at a higher degree of temperature. And it is almost a matter of compulsion to look for and to admit a governing centre.

Reichert and Bernard have shown it is not by the variations in the loss of heat, nor the variations in the increase of heat-production, nor vascular influence, that changes are produced or constant temperature is maintained at any given point. After dividing the cervical sympathetic on one side, the side operated upon assumed a temperature several degrees higher than that of the other side without a change of vascularity; and that the stimulation of the central end of the divided auricular nerve, sufficiently intense to give rise to pain, occasioned, on the one side in which the sympathetic was intact, a fall of several degrees of temperature in the ear, unaccompanied by any pallor, while on the side on which the sympathetic had been divided a rise of temperature was at the same time observed. "That is to say, the sensation of pain gave rise, by reflex action through the intact cervical sympathetic, to a refrigeration of the ear, without any vascular change in the ear and in spite of an increased temperature of other parts of the body."

If these statements are admitted as true, it is not saying more than present accumulated facts warrant in saying, that this regulating vaso-motor function may so direct temperature that it becomes a conservative force in favor of the well-being of the organism, and that there is a want of clinical evidence in support of the declarations that pyrexia causes a melting away of the nitrogenous tissues of the body,

*Read before the Pickaway (Ohio) County Medical Society, March 1, 1882.

which have been represented as wearing out quite slowly under ordinary temperature, but oxidizing so rapidly at an elevation of a few degrees only above normal, that this monster, once pyrexia, now "hyper-pyrexia," has been described without reality, asserted without doubt, reiterated without knowledge, and believed without evidence as destroying cell-formation, changing the character of the blood, destroying the muscles by fatty, granular, and waxy degenerations, paralyzing the heart, destroying the liver, kidneys, and lymphatics, and finally—the frightful statement—"cooking the nerve-pulp" and turning the case over to coma and death.

Yes, these parrot like stories of pathological fiction, so often told, seem almost an established reality, and it is with difficulty it can be realized that dupes are more frequently than in any other way dupes of opinions, theories, and oft-repeated dogmatic assertions.

If pyrexia is but a symptom of disease, and not always a true measure of the gravity or severity of the attack, and even when disproportionately high has not been shown to be especially detrimental to tissue integrity, or seemingly incompatible with human life, but, on the contrary, that even extraordinary high temperatures may be endured in disease for long periods, without detriment or danger, and that such cases, as a rule, end in recovery, is there not reason enough in all this to call for a careful investigation of the part taken by pyrexia in disease?

The clinical histories given by Dr. Philopson, Davis, Little, Teale, Roddick, Donkin and others, have completely overturned all suppositions on this subject, especially when it is known that patients may live and do well with temperatures ranging from 108° to 122° Fahr. for weeks and for months, and make good recoveries.*

Temperature high or temperature low is not disease. Disease is chemical change produced in the organism by foreign organic or inorganic matter; and, as a fact worth remembering, in those who die from any given disease, whether accompanied by a normal, subnormal or supernormal temperature, the pathological appearances on post-mortem are the same. It is often a matter of surprise that contributors of medical literature will go so far as they sometimes do to make facts-in-form comport with preconceived theories. It has not only been assumed that temperature produces tissue-destruction, but of late that bodily heat in disease is a "complication" as well as a symptom, and an attempt has been made to change a very well-defined matter indeed, by calling the pyretic state accompanying fever a "hyper-pyrexia," all to support and justify a theoretical and empirical plan of treatment. But standard authorities on this subject say hyperpyretic temperatures are such as considerably exceed even the *high febrile*, and which are by no means to be merely received as an expression of very *intense fever*. And when pyrexia is named it is understood to mean a rise in temperature as may occur in disease, including inflammations of all kinds, varying in height, but even at the very highest not hyper-pyretic—even at the very highest not disease.

Microscopists and scientists have shown, and to the belief of which we are bound by facts as much as we are by the statements of Harvey and Galileo, that both animal and vegetable micro-organisms are developed from disease-germs—that these organisms produce disturbances we call disease. And it has been shown that these micro-organisms live and breathe just as larger animals and plants live and breathe. So, when we speak of disease, we but speak of animals and plants, things that live and move, and have a being, a substance, a solid.

The fungoid mould called coprinus domesticus is a well-known sample of these organisms. It is the cause of influenza, a most infectious disease, so much so, at least, that it has passed into a common saying, if a cat begins to sneeze from this cause, the chances are it will spread itself to every human member of the household. That all zymotic diseases, or the classification termed such, are produced by similar specific disease-organisms, no one can at present successfully refute. The relation of some of these organisms to disease has already been established, and it may be inferred that a similar relation exists among other diseases of the class, to organisms yet undiscovered. For when the law and requirements necessary to produce one ear of corn is known, it is conclusive proof of the requirements necessary to the production of every other ear of corn and, more, the whole cereal family. So in disease; enough has been absolutely proven to establish the natural causes that develop and perpetuate all diseases we term zymotic, specific, and contagious.

Although many of the classified organisms producing disease are said to resemble each other so closely that it is difficult, if not impossible, to distinguish one from the other, yet we know one produces one disease and another similar looking organism produces another disease—one brings forth typhoid fever, another small-pox, another measles, another scarlet fever, etc., each after its kind, making, if not an ocular, a clinical difference quite as important as apparent. An inoculation with a small-pox germ never produces measles—never produces scarlet fever, nor any other disease excepting the one, that of small-pox. Each germ has its own manifestation and no other; and all the discussion of identity and similarity in appearance is made to disappear in the clinical difference in their development as disease. And it may at once be admitted there is a close resemblance, but still a difference; and, as a competent observer remarks, no closer resemblance perhaps, even in those which have conformations the nearest identical, than exists between a tiger and a zebra—both these animals having striped skins, four legs each, and each a tail, yet having entirely different constitutions, one subsisting only upon animal, and the other only upon vegetable food.

The bacilli in the saliva of persons suffering from syphilis, rabies, and glanders, have a close resemblance, yet they develop entirely different consequences. And it has been shown by Buchner that, while the bacillus septicæmia (the bacillus that produces metastatic abscess, septic fever, etc.) resembles very closely the bacillus anthrasis (the micro-organism that produces splenic fever, anthrax, or what is known as wool-sorter's disease), the action as well as the subsistence of these organisms is entirely different, one flourishing luxuriantly in a vegetable infusion, while the other requires an animal sustenance—one growing and propagating in living blood, the other perishing immediately in this menstruum. One produces a fever with a high but fluctuating temperature, and is a disease of pro-

* British Medical Journal, January 24, 1880. Lancet, April 24, 1880. Medical Times and Gazette, April 24 and May 1, 1880.

longed duration; the other produces a fever with a low temperature, that runs a rapid and fatal course. Again, the bacillus typhosis, the cause of typhoid fever, has usually a definite, self-limited course, with an elevated temperature and small rate of mortality, but soon destroys the patient if the temperature-point does not rise above normal—at least those who have the disease without pyrexia seldom recover, as shown by Drs. Broadbent, Gibson, Johnson, Thompson, Jones and others, and verified by Wunderlich.

I might go on and enumerate many important and well-authenticated discoveries in the etiology of fever and the part played by vibriones, micrococci, bacteria, spirelli, bacilli, and the various animals and plants which in embryo float in the air we breathe, the water we drink, and food we eat—animals and plants that do not come into existence *de novo*, but are developed from eggs and seeds, and require the necessary surroundings for their development. But enough is here given for my purpose, to show in what "fever" consists; to show that "*fever*" in the usually accepted sense is not *heat*; that pyrexia is but a symptom of disease; to show that a rise of the temperature-point does not indicate an increase of metamorphosis or heat-production, and may not be the correct index to the severity of the disease; to show a high temperature may possibly indicate the amount of reactive force set up in favor of health; to show that zymotic diseases are usually dangerous in proportion to the absence of this pyretic force; to show that the process called specific disease is the destructive work of living organized matter; to show that these organized beings multiply and propagate rapidly, in and out of the body, at a temperature near the normal standard; to show that these organisms are more destructive to life or tissue-integrity in a temperature below normal, than in a temperature above normal; to show that a temperature but little above normal is detrimental to all forms of disease organisms; to show that an obstruction to the rise of the temperature-point in disease forms grounds for an unfavorable prognosis.

According to Leibermeister, the post-mortem appearances revealing changes that have taken place during fever are in many cases the consequence of the increased bodily temperature, and frequently the only cause of death. Leibermeister attempts to prove these statements by citing to the constant occurrence of albuminous infiltrations; to which Dr. Wagner replies: To this a number of important objections can be made; that such infiltrations are entirely absent in some cases of high temperature, and as often occur under conditions in which very slight or no fever at all existed. "The degeneration of muscles (says Wagner) is also believed by some to be the consequence of fever; but this is present under such various circumstances that its cause must also be considered as unknown." Therefore, if persons die of these poisonous animals and plants with a high temperature throughout the course of the attack, and if persons with the same disease also die more certainly and more speedily without this rise of temperature, may it not fairly be asked, What has pyrexia to do in producing or preventing death?

Again, if in persons dying from the diseases produced by these micro-organisms are found the same pathological changes after death, where no rise of temperature existed, as are found where high temperature existed as the prominent symptom, may it not be asked, What has temperature to do in bringing about these pathological changes?

Pasteur, Klebs, Buchner and others have shown that disease-microbes propagate rapidly, in a proper menstruum, at a temperature above 85 but below 100° Fahr., and that a higher temperature obstructs their progress and development, as well as destroys their existence. This, with the universal clinical experience that a grave disease with a low temperature is cause for an unfavorable prognosis, points at least in the direction of cause and effect, and gives an intimation that pyrexia is not disease, and that high temperature may do more than gauge the severity of the symptoms in disease. This is, to a very great extent, corroborated by many physiological and pathological facts. A high temperature can exist without any perceptible disorder, while with a very slight rise, or no rise at all, there may be severe manifestations of disease. Yet high temperature, as the rule, denotes severity of the affection, and Drs. Wilson and Murchison have shown that a much larger per cent. die in typhoid fever with a temperature over 104° than those having a pyrexial run less than this; but they failed to prove by these statistics that increased temperature makes the difference, for this circumstance merely points out the fact that persons having in fever a high temperature have one of the symptoms of a severe form of the disease, and that the temperature-point has come to tell the condition, and the messenger that gives the alarm should not be mistaken and misused for the offending intruder.

On the back of this is the evidence that cases of disease which abort are those that start out at the very onset with a high temperature. This was noticed and published by Dr. Baumler, Professor of Clinical Medicine in the University of Freiburg, in Baden, that the mildness of an attack of fever does not so much consist in the slightness of the symptoms as in the shortness of the whole attack—the symptoms may set in very grave and end in a week, while, on the other hand, they may begin mild, and last four weeks or more, continuing so mild that the patient can with difficulty be kept in bed. In the cases of a short duration, the abortive cases, the fever at the onset of the disease is always very acute. No satisfactory explanation of this has ever been offered. It may be, however, that the absence of high temperature favors the continuation, multiplication, and even reduplication of disease-organisms, while an elevated temperature at the onset, or in the early stages of their growth, disturbs their progress and development and aborts the disease. The abortive cases occur under circumstances the reverse of relapses. Relapses, as a rule, take place in the milder attacks with little pyrexia, or in severer cases where the temperature has been interfered with and has been kept depressed by the use of anti-pyretics. Dr. James C. Wilson, in his treatise on the continued fevers, assigns as a reason for relapses, as probable, that some portion of the poison does not undergo those changes in the body, which are necessary to its destruction or elimination, until a later period than that to which the primary attack is due, and that relapses are much more apt to occur where the temperature is systematically kept down by cold baths than where the fever is allowed to run its course unchecked.

Clinical observations are not silent upon this subject. Attacks with high temperature may suddenly end and speedily recover, and mild cases, and severer ones when treated so as to reduce the

pyrexia, frequently relapse, and undergo a sudden or even fatal aggravation.

All other things being equal, it would appear that severe zymotic diseases with a high temperature are less liable to complications and less dangerous than the same cases would be with a depressed temperature. And while high temperature requires a correspondence of other symptoms to indicate severe disease, there may be severe disease shown by all other ordinary symptoms, excepting pyrexia. And the question demanding serious consideration is, Why does the absence of this one symptom, a rise in temperature, add gravity to the prognosis? In cholera, yellow fever, typhoid fever, typhus fever, scarlet fever, small-pox, and anthrax, without a change of temperature above normal, attacks are generally and immediately fatal, while these diseases, and even pyæmia and septicæmia, with a high temperature may last a long time and yet recover.

There may be an explanation to this, for Dr. Marchiafava, of Rome, found the bacillus malarius, which is seen in the blood at the beginning and during the chill period, disappeared while the fever was at its height, and left nothing to be seen excepting the spores; and while the bacillus is readily destroyed by a temperature a few degrees higher than the normal temperature of the body, the spores show a remarkable resistance to destructive agents.

Although not actually proven that the malarial bacilli of intermittent fever are destroyed by the high febrile action, their sudden and regular disappearance under a febrile temperature makes it highly possible indeed that such is one way in which the system reacts against these organisms in favor of health.

I am aware there has been an attempt to throw discredit upon Dr. Marchiafava's discoveries, but it has only added undoubted confirmation of the truth of every statement. Since the publication, many cases have been examined by competent scientists, and have gone far to establish his announcement, by showing the presence of bacilli and their disappearance, as described by Dr. Marchiafava. There is good authority also for the assertion that Professor Perroncito, of Turin, one of the leading mycologists of Italy, has recently repeated these observations in the hospital of Vercelli in Piedmont, and found the bacillus in the blood during the cold stage in every instance, and that they disappeared during the hot stage. And still more recently, these important discoveries have received additional confirmation by Professor Harley, of London.

Another fact that appears well settled and must not be lost sight of. It is this: While the bacilli or developed animals and vegetable organisms are extremely detrimental to health and life, the spores are entirely innocent.

But of all the collections of matter pointing to pyrexia as a conservative force in disease, no one budget has contributed more and of greater weight than the clinical experience based upon theories of antagonistic treatment. The present antipyretic medication of a symptom in disease is to-day as universally popular all over the world as was ever that of blood-letting and the spoliative plan, which ended but a few years since. With unwavering belief in the assertions of its inventors, it has been perseveringly followed, with the motto, "Persist in the exhibition of the remedies until success crowns the effort;" and no one can complain that effort enough has not been made. Yet, unfortunately, success has not crowned the persistence, and the best observers all over the world are constantly announcing their disappointment, disbelief, and condemnation of the practice.

Hankel, of Leipsic, a pupil of Wunderlich, and one who has done his part equal to any other man living to disseminate the antipyretic theories, now says he has been at last forced to admit that although antipyretics may lower the temperature, they prolong the disease. In France the same is asserted by Hirtz, Cobberts, and others. In England Dr. William Jenner, consulting physician to the University College Hospital, says of the antipyretic treatment: "Neither my own limited experience, nor the evidence adduced by others in its favor, has carried conviction to my mind of its advantages." And of quinine and salicylate of soda, he has been disappointed in their effects as reducers of temperature, while he has seen both occasionally do irreparable damage by disturbing the stomach and interfering with digestion. Dr. Bristow, in the *British Journal of Medical Science*, says of quinine and salicylate of soda: "I must confess that my own experience of their use has not impressed me favorably."

Professor Klebs has shown that typhoid fever is dependent upon the bacillus typhosus, and concludes: "If enteric fever really depends upon the development and migration of an organism, the therapeutic indication is to check the growth of this organism." And says at the present time the treatment is mainly directed toward a reduction of temperature, which he thinks is utterly useless. In support of these views, Prof. Klebs quotes Straube, Fraentzel, and others, giving epidemics of typhoid fever with unusual gravity, but without much rise of temperature, and insists that so much attention to temperature is not justifiable.

Most persons know the great majority of cases of disease would recover without any treatment, and that it is to the small per cent. of those which would die without treatment that medical aid is of any real importance; yet no statistics or collated facts have satisfied the sceptical world that the antipyretic treatment has stayed the hand of death in a single instance. In fact the advocates of this theory are quite careful to say in what kind of patients and what circumstances the treatment is to be used, and that it is not adapted to the naturally fatal cases; and their statistics are made up principally from subjects which would get well without treatment; and there is a reason for their mortality rates.

Leibermeister admits that the severe cases in which there is every probability of a fatal result from bodily weakness and severity of the disease, are not cases in which the antipyretic treatment is admissible, and of course these do not receive antipyretic attention, and consequently are not made to appear in the formulation of his statistics. Why are these severe cases, in which there is every reason to anticipate an unfavorable result, not treated antipyretically, if not that the answer comes with the experience?

Take the formerly prescribed treatment of fevers by blood-letting, or any other empirical hobby that has made its run with the profession, and eliminate the theories and opinions, and there will be manifestly little else left but comparative statistics of the most unsatisfactory character, as they are not made to compare with Nature's own effort and ability to cure unaided. Statistics can show but little when collected with reference to other modes of treatment,

and are often made in good faith to establish a favorite supposition, or to give the author the credit of a discoverer.

Some years since, Dr. Irving W. Lyon, of Bellevue Hospital, New York, published statistics showing that the addition of sulphuric acid to the ordinary treatment of fevers reduced the rate of mortality one-half over fevers treated in the same way without the acid. Yet Dr. Lyon failed to establish anything, as the fallacy of his reports consisted in applying the treatment and the variations in the treatment to different epidemics, in different years and different months in the year. Statistics cannot be taken as a guide to successful therapeutics, although they may have more or less influence in giving popularity to certain lines of empirical practice.

Dr. Austin Flint, who has given the antipyretic treatment no small amount of attention, does not speak of it very favorably, as far as his experience goes. "It neither increased nor diminished the fatality over the ordinary mode," is the most he could say; those that would die without antipyretic treatment, died with antipyretic treatment, and it neither diminished nor increased the fatality over the ordinary mode.

I have thus attempted to go over the oft-trodden ground called fever, and have endeavored to pick up and present some of the many established facts that lie scattered here and there over the uncultivated field for science—facts which show disease is an entity, a substance, an organism, the result of an animal or vegetable propagation; facts which show that pyrexia is but a symptom of disease; that it may not denote increased metamorphosis or increased heat production; that it may indicate the amount of reactive force in favor of health; that it checks the growth and multiplication and migration of disease organisms, and lessens the dangers in zymotic diseases; that temperature and its regulation is a vaso-motor process, and that an obstruction to the function of this heat-regulating centre is detrimeutal, if not dangerous, in disease.

In all this I have no deductions to make, no theories to advance, no hobby to pull down. Yet inasmuch as the field of preventive medicine has been opened up with discoveries of so much interest and of such infinite benefit to the human race; and as the artisans are already upon the ground to change the etiology of disease and to remodel and rebuild our therapeutics; and as clinical experience has shown treatment based upon empirical guessing has ever been faulty and inefficient, may it not be well to submit more directly to the light of science and give less attention to the treatment of symptoms, and more to Nature's own mysterious ways, and with antiseptics, antizymotics and germicides aid in the suppression or destruction of the organisms causing the disturbance? "For we are not yet sure but what a high temperature is one of the safeguards and efficient means employed by Nature to rid the system of an essential poison; and it is highly possible, indeed, that the febrile heat is one way in which the system reacts against the organisms that produce disease, in favor of health."

Death of an Anti-Vaccinator.—A Chicago paper reports the death, by small-pox, in that city, of a physician quite prominently known for his anti-vaccination sentiments.

THE TREATMENT OF HEMORRHOIDS BY THE DILATATION OF THE ANAL SPHINCTERS.

By WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.

(Continued from page 512.)

Anatomy and physiology.—I will now give in as brief a manner as possible the anatomical disposition and the physiological and pathological action of the internal and external sphincters of the anus, the only sphincter muscles proper to the terminal outlet of the rectum. I use the designation *internal sphincter* with a full understanding and conviction that it is a sphincter, although I am aware that some able authors who are anatomists, and some who are not, deny sphincteric functions to it, and some even deny the existence of such a muscle. These authors declare that no such property or function exists in, or can be claimed for, the aggregation of the bundles of circular muscular fibres, which, like a band, encircles the inferior extremity of the rectal pouch, and which comprises that which has been denominated *sphincter ani internus*. They maintain that this collection of circular muscular fibres differs in no respect whatever, so far as its function is concerned, from that of the ordinary circular fibres of the intestinal canal; that it, like they, performs the office merely of a detrusor, and not that of a sphincter. There can be no dispute as to the existence of this collective body of circular muscular fibres, and that it is normal and constant. The only controversy is in relation to its real function. I therefore, in this connection, deem the subject of sufficient importance, anatomically, physiologically, and surgically, to enter into it somewhat in detail.

A number of anatomists neither describe nor endorse the internal sphincter ani, and many confound the two sphincters by describing them as one. Cruveilhier says: "The sphincter internus of authors is nothing more than the last ring of the circular fibres of the rectum" ("The Anatomy of the Human Body," p. 380. American edition, by G. S. Pattison, M.D. Imp. 8vo. New York, 1844). Cloquet, like Cruveilhier, neither describes nor endorses the internal sphincter, but passes it over by saying that "many anatomists describe around the lower part of the rectum a fleshy ring under the name *inner sphincter*" ("A System of Human Anatomy," p. 618. English version. By Robert Knox, M.D. Boston, 1813). It is in this brief manner that these two eminent anatomists dispose of the internal sphincter muscle—a muscle which, with its colleague, the external sphincter, performs so important a part before, during, and after the act of defecation.

This very distinct sphincter muscle was correctly described, however, at an early date by several able authors. Albinus, an eminent anatomist of the seventeenth century, denominates the bundle of circular fibres of the muscular coat of the rectum, which encircles the inferior extremity of the rectal pouch, *sphincter ani internus*, which he describes as distinct from the *sphincter ani externus* ("Tabulæ Sceleti et Musculorum Corporis Humani," lib. ii., cap. 3. Folio. Lugduno-Batavorum, 1747). The celebrated anatomist Winslow, of the eighteenth century, when speaking of the internal sphincter of the anus, says: "The intestinal or orbicular sphincter of the anus consists merely in an augmentation of

the inferior portion of the circular fleshy fibres of the extremity of the rectum ("An Anatomical Exposition of the Structure of the Human Body," vol. ii., p. 149. English Version. By G. Douglas, M.D. London, 1732). Mr. Douglas, another able and distinguished anatomist of the eighteenth century, and the translator of Winslow's "Anatomy," says that "The anus has two sphincters. The first may be called *externus*, or *cutaneous*, which surrounds the anus about the breadth of an inch, being placed immediately below the integument. The second is named *internal*, whose fleshy circular fibres encompass the lower end of the intestinum rectum. Its use is to prevent the involuntary excretion of the faeces, by shutting up or closing the passage of the rectum" ("Descriptio Comparata Musculorum Corporis Humani et Quadrupedis." Versio Latini. Cap. xxiii. 8vo. Lugduno-Batavorum, 1738). Albinus, Winslow, and Douglas were the first anatomists, so far as my reading extends, who correctly described and named the internal sphincter as a distinct muscle. Wilson says, with regard to the circular fibres of the superior and central portions of the rectum, "There are no circular fibres in these portions of the rectum, they appear to have slipped downward to the lower end of the intestine, and to have formed there a thick muscular ring, the internal sphincter ani" (*The Dissector*, p. 56. Edited by P. B. Goddard, M.D. 8vo. Philadelphia, 1844). Professor Horner says that "the circular fibres form a complete coat, and just below the pouch of the rectum are multiplied so much for eight or ten lines as to be a perfect internal sphincter-muscle" ("Special Anatomy and Histology," vol. ii., p. 46. Eighth edition. Imp. 8vo. Philadelphia, 1851). I will now briefly describe the internal and external sphincters. The internal sphincter ani is a flat and slightly oval muscular ring, composed of numerous bundles of the circular fibres of the rectum, so multiplied and so closely set together as to form a complete coat, encircling like a belt the superior extremity of the anal canal, so that it may be regarded as an aggregation of bundles of circular fibres. It bears considerable resemblance to the ring of fleshy fibres which encircles the pyloric orifice of the stomach, denominated by some authors the pyloric muscle. It is situated just below the terminal pouch of the rectum, after this viscus has left the level of the prostate gland, and it varies from seven to fifteen lines in breadth, and from one to three in thickness. At its superior margin it is quite thin, being continuous with the corresponding plane of the muscular coat of the rectum, but as it descends it becomes thicker, more distinct, and more fully developed, so that by the time it reaches its inferior border, where it is embraced by the fibres of the superior part of the external sphincter, it becomes quite strong and well-marked. It is at this point where its greatest power of contraction resides, and it closes the canal here with considerable exactness and firmness. When this muscle is examined carefully *in situ* it is infundibuliform, having its superior opening, or wide mouth, presenting upward toward the prostate gland and *base fond* of the bladder, and its inferior opening, or neck, presenting downward, varying in length from eight to fifteen lines, and forming about one-half of the canal of the anus. Internally this muscle is separated from the mucous coat by the hemorrhoidal plexus of veins, some branches of which traverse the substance of it. The internal sphincter ani is wholly composed of circular fibres, which are capable of themselves alone of completely closing the anal canal, as a sphincter, at its inferior border.

The external cutaneous sphincter ani is composed of elliptical fibres, which form a broad flat band, about ten lines in breadth and about the same in thickness, and placed immediately beneath, and intimately united to the integument of the anus, the orifice of which it completely circumscribes. This muscle originates in the narrow fasciculus of tendinous fibres attached to the posterior face of the last bone of the coccyx, and extends to the anus. From this source, passing downward and forward, it separates into two semi-elliptical fasciculi of concentric fibres, whose direction is outward at an acute angle, expanding on each side of the anus into the ischio-rectal fossa, nearly as far out as the tuberosity of the ischium; then, bending forward, they produce the arch of a circle, and in front of the anus become blended with each other, and are attached to the tendinous raphé of the perineum, at the point where the several perineal muscles unite; thus forming anteriorly an angle similar to that at which they parted posteriorly. The long diameter of the ellipsis extends from the os coccygis toward the symphysis pubis, having its angles very much elongated. The lateral diameter is in the centre of the interval, between the ischiatic tuberosities, and occupies about one-half that space. The point of the greatest contraction of the external sphincter ani is near its inferior margin.

The interlacing of the fibres of the two anal sphincters which sometimes, though rarely, occurs, doubtless gave rise to the erroneous idea entertained by some anatomists that these two sphincters were in reality but one. Nothing, however, is more easily demonstrated than the fallacy of this; the one consisting entirely of circular, and the other of elliptical fibres, and differing anatomically in many other respects.

M. Velpeau, in his description of what he calls the external sphincter ani, makes the singular declaration, if I understand his language, that this single muscle contains within itself two distinct sphincters—one composed entirely of circular, and the other of elliptical fibres—thus correctly, as it were, describing both the external and internal sphincters of the anus, but apparently under the impression that these two sphincters compose but one muscle. I have rendered his language thus: "If we carefully," says M. Velpeau, "dissect the external sphincter, we find that it is composed of two orders of fibres. The one forming complete and regular circles, is applied immediately on the exterior surface of the intestine and the integuments which enter the cavity of the canal; the other, united at right angles in front and behind, is separated into two fasciculi by the anal orifice. The first, being a continuation of the fleshy tunic of the organs of defecation, is alone capable of completely closing the anal opening and producing the concentric cutaneous wrinkles in its vicinity, and at the same time preserving its annular form; the second, composed of elliptical fibres, forming the proper sphincter, can only circumscribe an elliptical opening, and would reduce the anus permanently to a more or less elongated fissure did not the circular fibres modify its action" ("Traité d'Anatomie Chirurgicale ou Anatomie des Régions," tome ii., p. 272. 8vo. Paris, 1826). M. Velpeau again says, "The fleshy tunic of the rectum is almost wholly formed of longitudinal fibres, which predominate as far as the prostate gland, and of annular fibres, gradually increasing in number from this point toward the skin, where they form that which I have called *little sphincter*" (*op. cit.*, tome ii., p. 323).

As to the anus itself, I would remark that its direction is downward and backward, and when in the quiescent state it has the appearance externally of a linear or curvilinear orifice, with its long diameter in the antero-posterior direction, and its edges closely approximated; but when it is distended by the passage of hard fæces, or by the finger or bougie, it becomes what its name imports, *circular*. Indeed, by inserting the finger into the anus and dilating it, an elliptical figure may be converted into a round or circular one.

The internal sphincter of Lisfranc.—Besides the internal sphincter already described, M. Lisfranc, a number of years ago, announced the existence of another internal sphincter-muscle, about four inches above the verge of the anus. He, however, never demonstrated or described such a sphincter, but merely imagined its existence from the fact that he had observed the power of contraction and retention possessed by the rectum at that height without incontinence of fæces taking place after he had, in several instances, removed three or four inches of its inferior extremity on account of cancer (Malaigne: "Traité d'Anatomie Chirurgicale, et de Chirurgie Experimentale," tome ii., p. 343. 8vo. Paris, 1838). I would observe, however, that M. Amussat explains this power of rectum retention of fæces upon a very different principle altogether. He was of the opinion that the interior outlet of the body is naturally disposed to obey the will, independently of its muscular apparatus, so as to favor voluntary retention of the fæces; consequently that the power of retaining and controlling the discharge of the fæces does not solely depend upon the sphincter ani muscles (*Gazette Médicale de Paris*, p. 753, Novembre 28, 1835).

The internal sphincter announced by M. Lisfranc was subsequently described by M. Nélaton, and verified by M. Velpeau, who thus speaks of it: "I have proved the existence of a kind of sphincter of the rectum described by M. Nélaton. It is a fleshy ring placed about four inches above the anus, exactly at the spot where stricture of the rectum—above the anal region—most frequently occurs. If, after having everted the rectum so that its mucous surface becomes external, we slightly inflate it, we see this muscle, which M. Nélaton proposed to name *superior sphincter*, is formed of fibres united into a fasciculus. It is thickest in front, where the fibres seem collected in the retiring angle corresponding to the union of the first with the second curve of the rectum; whilst posteriorly they are disseminated over its convexity" ("Anatomy of Regions," p. 515, Hancock's English Version. Imp. 8vo. London, 1838).

Professor Horner, in speaking of this new internal sphincter, says: "I doubt very much the uniformity of the distinct existence of such a muscle, not having been able to find it in the dissections which I have instituted for the purpose, unless a portion of the ordinary circular fibres should have been collected for that designation, in which case several other sphincter muscles may be said also to exist" (*op. cit.*, vol. ii., p. 46). A number of years ago, I also made diligent search for this sphincter muscle at the place designated by Lisfranc, Nélaton, and Velpeau, but failed to find it. I therefore concluded with Professor Horner that if it ever exists, it does not do so uniformly; that it is neither normal nor constant. The place these authors point out as the exact locality of this muscle is that part of the rectum just above its pouch, where, according to M. Velpeau, and as far as my own experience goes, organic stricture of the rectum most commonly occurs.

In my dissections of the rectum and colon, I have found much stronger evidence of a *superior sphincter* at the juncture of the colon with the rectum than at the place so much lower down mentioned by these authors. At the termination of the colon, there always exists a narrow neck or contraction, marked externally by a slight circular depression, and internally in the same situation by a little projection of the mucous lining. This narrow neck or annulus which distinctly marks the boundary of the rectum and the colon, and which has been described by others, seems to a certain extent to possess the power and to perform the office of a sphincter: so that the description which Velpeau gives of Nélaton's superior sphincter, if applied to it, would, in several respects, quite appropriately describe it. I consider this fleshy annulus as the normal condition of this part of the intestine, and not as preternatural, or as a congenital malformation, as believed by several authors. Indeed, it very much resembles in character and in function the pyloris of the stomach, for a remora of the contents of the sigmoid flexure of the colon takes place at this point previous to their entrance into the rectum, as the contents of the stomach do previous to their entrance into the duodenum. Mr. O'Beirne also notices this peculiar contraction at the inferior extremity of the colon, and attributes to the part very extraordinary "physiological phenomena" ("New Views of the Process of Defecation," p. 31. 8vo. Dublin, 1833).

Hyrtl, a distinguished German anatomist, has of late revived the subject of the internal sphincter of Lisfranc, by devoting much time, labor, and talent in endeavoring to demonstrate and prove the uniform existence of this sphincter, which he denominates *sphincter ani tertius* ("Topographical Anatomy").

Is the sphincter ani internus merely a detrusor?—The number of bundles of the circular fibres which compose the internal sphincter ani, and which impart more or less thickness and body to it, is a positive evidence that it is intended for a different purpose than that merely of the ordinary circular fibres of the intestinal canal. Indeed, the augmentation of volume, and consequently of power, proves that this aggregation of the bundles of the circular fibres is a sphincter or constrictor muscle, and fully corresponds with its function, being especially armed and equipped for the purpose. Furthermore, there appears to be an obvious necessity for a sphincter muscle immediately at the termination of the rectal ampulla and commencement of the anal canal, or short narrow neck of the rectum, for the purpose of arresting and retaining the fæces in that depository for the time being, or until nature calls for their evacuation. Apparently the same necessity exists for a sphincter at the commencement of the neck of the bladder, the neck of the uterus, and at the pyloric end of the stomach.

Now it is not necessary that the circular fibres of the rectum should always completely surround it to enable them to perform the office of detrusors or accelerators, for in some parts of it they are arranged in semicircles or in segments of circles, and yet efficiently perform their function of urging on, by their peristaltic motion, the contents of the canal onward and outward. It is, however, essentially necessary that the circular fibres of the rectum should completely surround it in sufficiently aggre-

gated bundles to enable the collection thus formed to perform efficiently the office of a sphincter or constrictor, as it does in the formation of the internal sphincter ani, which possesses the power of completely closing the anal canal at the bottom of the rectal pouch.

Some authors consider that the bundles of circular fibres composing the internal sphincter are wholly of the involuntary character; whereas the elliptical fibres composing its colleague, the external sphincter, are entirely of the voluntary character. With regard to the character of the internal sphincter, they reason that, inasmuch as it is connected with the common intestinal plane of arched fibres, and is analogous to the pyloris and the cervical fibres of the bladder and the uterus, that it therefore of necessity cannot act as a voluntary muscle. It is trne that from analogy one would naturally be inclined to consider the internal sphincter as immediately under the control of the splanchnic and the external sphincter under that of the cerebro-spinal centres. But the truth is, and it has been verified, that the functions of these two sphincters are of a mixed character, partaking in part both of voluntary and involuntary motion; but the exact proportion, however, in which each possesses the power or the ability of voluntary or involuntary motion bestowed upon it by the two classes of nerves has not as yet been demonstrated. I therefore consider the internal sphincter not wholly independent of the will, as it has been represented to be, but it, with its colleague, is one of those muscles which acts imperceptibly, yet is subjected more or less to the will, as the muscles of respiration. The tonic contraction of the two anal sphincters which is intended to close the canal and retain the fecal matters in the intestine is always involuntary, and not under the influence of the will. They, however, may be stimulated to act directly by volition, as when they do so to prevent a strongly impending evacuation of the bowels; or indirectly by reflex irritation, the one action being voluntary and the other involuntary.

Cause of the involuntary contraction.—As to the cause of the involuntary contraction of the anal sphincters, it is always produced by reflex nerve-action, consequent upon sympathetic hyperæsthesia of the inferior extremity of the rectum, induced by some stimulating or irritating agent operating upon the mucous membrane or muco-cutaneous tissue of the canal and orifice of the anus; such as an anal fissure, an inflamed or irritable hemorrhoidal tumor; or irritation or inflammation of the mucous membrane of the canal of the anus. This arbitrary contraction is also sometimes due to reflected irritation from some of the genito-urinary organs, being consecutive to a morbid sensibility, or a disease in some one of them. The rationale of the phenomenon then is that the anal sphincters are brought into this exalted action solely in consequence of the highly sensitive and irritated condition of the tissues in their vicinity, through reflex nerve-action. The sensitive nerves being shocked by the reflex action, from whatever cause, an involuntary contraction of one or both sphincters takes place, and continues in proportion to the intensity of the irritation and pain of the primary cause, the contraction thus continuing and varying in degree with the nature of the reflected excitation. This exalted contraction of the anal sphincters resembles that of the orbicularis-palpebrarum in strumous ophthalmia, provoked by the stimulus of the strong rays of light. It is in this manner, then, that the involuntary contraction of the anal sphincters may be provoked by the stimulus which is exercised upon the mucous membrane, or muco-cutaneous tissue of the anal canal, by any preternatural exciting cause whatever.

I would further remark, in illustration of this intricate subject, that physiology, as now taught, satisfactorily accounts for the phenomenon of spasmodic or involuntary contraction of the anal sphincters in all the variable degrees of irritation or excitation to which the efferent nerves, which have their origin at the seat of the morbidly sensitive parts, are subjected. The impression communicated to the peripheral distribution of the nerves of sensation is transmitted to the spinal centres, where, according to the primary laws of reflex nerve-action, a motor impulse is produced, and the fibres of the sphincter muscles in the immediate vicinity of the source of the irritation are impelled to contract spasmodically to a greater or less degree.

"*Sphincteralgie.*"—Some of the French surgeons now denominate the spasmodic or involuntary contraction of one or both anal sphincters, in anal fissure or hemorrhoids, *sphincteralgie*, and treat it as an entity—a disease in itself. But I ask, is the pain or disease in such cases really in the sphincters themselves or outside of them, in the morbidly sensitive and painful parts so violently grasped and compressed by them? I unhesitatingly answer that the pain in such cases is not in the constricted sphincter or sphincters, but in the morbidly sensitive and painful parts themselves, which are subjected to this mechanical grasping and compressing, and by which additional and most agonizing pain is communicated to the already painful parts. As an evidence of this, the involuntary contraction immediately ceases, without dividing or breaking the anal sphincters, or subjecting them to any treatment whatever, on simply removing or allaying by proper or judicious measures, the morbid sensibility and irritability of the constricted parts, which are in reality the primary cause of the spasmodic contraction. And, furthermore, this spasmodic contraction of the anal sphincters also spontaneously ceases, on the subsidence, sooner or later after the act of defecation, of the pain and irritability in the affected parts themselves, occasioned by the passage of acrid and stimulating fæces, and the straining efforts and tenesmus attending their evacuation. Now, if this theory, in such cases, is true, then the name, *sphincteralgie* is a misnomer.

Spasmodic contraction of the anus as a cause of hemorrhoids.—The involuntary contraction of the anal sphincters may either be a cause or an effect of hemorrhoids. When it is the cause of them, some other cause than hemorrhoids must first produce it. When the contraction is the effect of hemorrhoids, they themselves, of course, produce it by their own morbid sensibility and irritability, through reflex nerve action.

French authors generally now declare that this spasmodic contraction is not only an exciting or an efficient cause of the hemorrhoidal disease, but that it is almost the only cause of that affection. I admit that it is sometimes a cause of hemorrhoids, but that it is a frequent, or the most frequent cause of them I do not for a moment believe. In my judgment, it is greatly exaggerated as a cause of hemorrholds by these authors. Indeed, instead of the involuntary contraction of the anal sphincters being a primary cause of hemorrhoids, it is, in the majority of instances, only the effect of

them; for it cannot be denied that in every case of irritable hemorrhoids there is more or less spasmodic contraction of the anal sphincters, solely induced by the irritation of the hemorrhoids themselves, hemorrhoids being first produced by some other cause than spasmodic contraction of the anal sphincters, through reflex action, as the result of their irritability and excitability.

It is not the normal condition or tonic contraction of the anal sphincters, but the hyper or exalted contraction of them, which, under the stimulus of reflex nervous irritation, tends, more or less, to interfere with the free circulation of the blood in the hemorrhoidal vessels within the grasp of the active sphincters, thus tending sometimes to the production of the hemorrhoidal disease by introducing turgescence, hyperæmia, congestion, or stasis in some of those vessels. This contraction may also sometimes prove an efficient cause of hemorrhoids, in consequence of the violent straining efforts to evacuate the bowels which this active state of the sphincters induces. In such a case, a part of the mucous membrane of the rectum, together with the vessels it contains, is protruded beyond the sphincters at each time of the expulsion of the fæces, and being there caught by the spasmodic contraction of the muscles, its vessels become engorged or strangulated. The repeated occurrence of this circumstance, especially when assisted by constipation, is quite sufficient to produce a varicose condition of the hemorrhoidal vessels.

I would observe here that any defect, too, of the muscular power of the sphincters may also prove a cause of hemorrhoids; perhaps even as much so as the too powerful action of them. When atony of the anal sphincters exists, the dilatations, turgescence, or tumors form on those parts of the anal canal invested by them. For the want of the natural support which the tonic contraction of these muscles affords, the hemorrhoidal vessels in this depending situation become relaxed, and allow of over-distention, by undue quantities of blood entering into them; hence the necessary concomitants of this condition are dilatation, turgescence, hyperæmia, congestion, stasis, and tumors. Indeed, the tonic contraction and compression of the anal sphincters, when in their normal condition, upon the parts of the canal within their circumference or grasp, prevent, to a great extent, any undue quantity of blood, or its elements, from entering into and enlarging the vessels of those parts. With regard to the spasmodic contraction of the anal sphincters, more or less inflammation and nervous irritation in the surrounding parts are always present; and to ascertain to a certainty that involuntary contraction of the sphincters obtains, it is only necessary to attempt to insert the finger into the anus, when it will at once encounter obstinate resistance, and cause more or less pain. When the resistance, however, has been partially overcome, and the finger fairly entered into the anal canal, it will be firmly grasped by the sphincters as by a vice.

249 Madison Avenue, New York.

Veterinary Medicine in Germany.—I was reading, a few days ago, of the Veterinary Department of the University and Horse Hospital. To obtain a diploma from this school one must attend six semesters, averaging five months each, or twice, nay thrice even the amount of study required of American physicians. Let no one say invidiously that the Germans value their horses more than we do human beings!—*Correspondence Buffalo Medical Journal.*

A CASE OF INTERMITTENT EPISTAXIS,

Cured by Quinia, after Failure of usual Remedies, with Remarks on the Management in General of Nose-Bleed.

By P. F. HARVEY, M.D.,

Assistant-Surgeon, U. S. A.

First-Class Private A. W., Engineer Corps, aged thirty-seven, applied to me on February 7, 1882, for the relief of a severe epistaxis that had commenced the day previous. I ordered the nostrils to be injected with a cold saturated solution of alum, and a drachm of ergot to be given internally. This arrested the bleeding temporarily, but in a couple of hours it recommenced with all its initial severity. The patient now was directed to seat himself in a cool room with his head over a bucket, and apply a cloth, soaked in ice-water, over the nose. In this manner a clot was formed and the bleeding again stopped. Having enjoined upon him the necessity of avoiding all interference with the clot, the projecting end was clipped off with scissors and he was directed to go to his quarters and remain perfectly quiet in a cool room. The directions not being observed, the bleeding recurred, and toward evening the patient was admitted to hospital. When I saw him on this occasion, there was no hemorrhage in progress. To guard against its return, however, it was deemed advisable to plug the posterior nares. Accordingly Bellocq's canula was passed, and an effort made to throw the button into the pharynx. This it was found impossible to do, on account of a broken vomer that turned the point of the instrument to one side. Several ineffectual efforts were made to accomplish the desired plugging, causing much pain, but without exciting any flow of blood. Later, however, the hemorrhage again commenced, and the pure Monsel's solution was thrown up the nostril, at once checking the flow. Ergot, chloride of iron, and muriatic acid were ordered to be given in combination, three times a day, as an internal hemostatic, conjoined with perfect rest and low diet.

Hemorrhage commenced the next day, notwithstanding these measures, and injections of tannin were ordered every two hours.

This general line of treatment was pursued until the 17th, when I made the discovery that the hemorrhages had taken place once daily during the seven preceding days, at or near 3 o'clock P.M. This periodicity attracted my attention, and the idea occurred to me that antiperiodic doses of quinine would effect a cure.

On the morning of the 17th, fifteen grains of quinine were administered in three doses, and the patient was carefully observed, to note the effect of the drug upon the hemorrhage. The usual hour passed and no bleeding occurred, but about one hour afterward, a small amount of serum or watery mucus was discharged, faintly tinged with a drop or less of blood.

On the 18th, fifteen grains of quinine were given with aromatic sulphuric acid, and all other treatment omitted. No bleeding, but a small discharge of serum occurred at an hour later than on the previous day. The quinine was repeated on the 19th and 20th, on which dates no discharge, either serous or sanguineous, took place.

The administration of quinine was then discontinued, and a tonic-hemostatic mixture was prescribed to remedy the somewhat anæmic condition

of the patient and guard against a recurrence of hemorrhage.

On the 25th, the patient's condition having greatly improved, and all tendency to a return of nose-bleed having apparently disappeared, he was returned to duty.

Remarks.—The dominant feature of interest in the foregoing case was the periodicity of the hemorrhagic and serous discharge, and its permanent arrest by quinine after the failure of other means. Since returning the man to duty, I have noticed by reference to Frankel's paper on "Nose-Bleed," in "Ziemssen's Cyclopedia" (vol. iv., p. 152), that "intermittent epistaxis, without fever, has been observed and cured by quinine." Such an event would seem to require the operation of "malaria" for its production. In the case reported, however, the patient had never had ague, and had not lived for many years in a malarious region; the attack came on in a month when even malarious districts are usually healthy, and in a country where the paludal miasm but feebly manifests its presence even in seasons most favorable to its evolution. What agency, then, determined the intermittency of the hemorrhage in this case? Might not a slight constitutional disorder, reaching its culmination at a certain hour every day from the operation of meteorological causes, bring about a localized vaso-motor paresis and give rise to a serous or hemorrhagic transudation in a part richly supplied with thinly covered vessels, such as the pituitary membrane? The hectic of phthisis, the congestive headache that occurs periodically, and certain kinds of cough that recur daily at certain hours, suggest themselves as conditions etiologically related to the case just narrated.

Quinine, by its sedative action upon the circulation, by its interference with the migration of leucocytes, and by stimulating the vaso-motor area, may be rationally selected as the means of cure in such cases. To what extent, if at all, the "malarial poison" acts in the manner suggested, and how correctly the *modus operandi* of quinine in the cure of ague is set forth above, are subjects that, I think, would bear more investigating. The failure to reach a satisfactory elucidation of the cause of marsh fevers after so many years of patient inquiry, seems to indicate that the proper line of research has not been followed—the clew not yet found. Malaria, bacteria, *et id omne genus*, have been figurative *ignes fatui*, and when stripped of all sophistry must be acknowledged to serve no useful purpose save the doubtful one of foils to our own ignorance. The active principle which causes fevers in marshy districts has never been isolated, although claimed to have been so by several investigators. A toxic substance was not long since obtained by Klebs and Tomassi-Curdeli from the Pontine marshes, which they claimed to be the *materies morbi* of intermittent fever, but Stemberg has shown that the fever excited by its injection into the blood is not the fever of ague. This failure and the many others preceding it do not prove that such a principle does not exist. Still, I am disposed to believe that the genesis of ague is to be found in a coalition of factors, such as food, temperament, atmospheric conditions, etc., and that its paroxysmal character is dependent upon an increased susceptibility of the system to yield to those causes which even in health intermittently assert themselves by modifying the interaction of the physical forces of the economy. Further, it seems more reasonable to me to suppose that quinia cures by modifying the vital processes, rather than by neutralizing a poison, for the reason, well known, that it is practically impossible to destroy germs without charging their habitat with disinfectants to such an extent as would be fatal to human life.

The management of epistaxis is usually an easy matter, but occasionally a case is met that proves rebellious and threatens the destruction of life unless speedily terminated. The remedy of plugging from behind is sometimes impracticable, as in the case above, and even when it can be applied is not always successful. Dr. A. Hartman, in a recent article,* goes so far as to condemn the practice of plugging the posterior nares, not only on account of the pain attending it, but from the danger of its causing disease of the middle ear, three cases of which he mentions in illustration. He advises the surgeon to localize the exact seat of hemorrhage, and to then apply a pledget of absorbent cotton directly to it. He states that this point is situated usually upon the septum or floor at the front part of the nose.

Dr. Verneuil, the eminent French surgeon, reports a curious case, in which epistaxis, occurring in cirrhosis of the liver, and which ergot and digitalis failed to arrest, was stopped by a fly-blister over the hepatic region (Phila. *Med. Times*, No. 345, p. 320).

Mr. Chas. B. Keetley, in the *Practitioner* for February, 1879, extols the use of hot water in the treatment of nose-bleed. He says when epistaxis comes on during the morning ablution with cold water, or during the progress of a cold in the head, hot water is most effectual. It answers also in cases of traumatic origin. The water, at a temperature of 120° to 124° F., need not be injected into the nostril, but only applied freely to the face. Chlor. potass. in the proportion of a large teaspoonful to a tumbler of hot water may be used as an injection, the salt preventing the swelling of the mucous membrane which often follows contact with pure water hot or cold. The hot saline solution has stopped an epistaxis instantly.

Mr. Cox, of Winchcombe, Eng., in a case of intractable epistaxis complicated with cardiac disease, injected up both nostrils a solution of one part liq. ferri perchlor. fort. and three parts of water, with the result of immediately and permanently arresting the hemorrhage. In two days a perfect plug was removed. Another case in a child, of great severity, in which all usual remedies had failed, was immediately checked by the same remedy. He prefers the injection to a plug of lint, as it is more easily applied, and more likely to be effectual on account of reaching the seat of hemorrhage with more certainty.

Dr. Leeper, in a communication to the Dublin *Journal of Medical Sciences*, reports a case successfully treated by the insertion into the nostrils of suppositories medicated with perchloride of iron. The hemorrhage occurred during the progress of an attack of typhoid fever, and was of great severity. Another case, occurring in a man seventy-two years old, was treated similarly with a successful result. Ergot was used internally.

Dr. Rose, an English physician, some years ago suggested the use of an India-rubber bag, to be passed into the nostril as far as the pharynx and inflated with air or iced water, thus forming a painless plug that exerts equal pressure upon all points of contact. The idea has subsequently been applied

* Zeik für Ohrenheilk.

in practice, and has been found to answer well in stopping nasal hemorrhage. Its removal is easily effected by turning the tap and letting out the contents.

Dr. Cleaver, late senior surgeon to the Liverpool Royal Infirmary, lauds the use of ergotin by hypodermic injection in all forms of hemorrhage not accessible to ligature, five grains with twenty-five minims of water being the amount he used in treating successfully three severe cases of epistaxis that had *resisted plugging the posterior nares.*

It is hardly probable that the surgeon will ever encounter a case of nose-bleed that will not yield to one of the above remedies. Should, however, the effusion continue after a fair trial of ergotin, hypodermically, local pressure by plugging, and the injection of styptics successively employed, he must look for a constitutional dyscrasia as the cause, and by removing that may expect to secure a cessation of the hemorrhage.

Fort Snelling, Minn., April, 1882.

TREATMENT OF FRACTURE OF CLAVICLE WITH WIRE SUTURES (LANGENBECK).

By W. W. DAWSON, M.D.,

Professor of Surgery, Medical College of Ohio.

The *Medical News* gives the *Deutsche Med. Woch.* credit for the following statement upon the treatment of and results in fracture of the clavicle.

"The unsatisfactory results which ordinarily follow the treatment of fracture of the clavicle in spite of the numerous forms of apparatus at the service of the surgeon, have led Dr. Langenbeck to adopt the above method."

The statement that the results in this fracture are ordinarily unsatisfactory is as remarkable as the proposed practice is novel and questionable. Are the results in fracture of the clavicle unsatisfactory? The deformity following ordinary plans is insignificant—a slight overlapping, often, especially in children, disappearing entirely. Are not the functions of the arm left intact? Do patients usually complain of either pain or disability? Even the medical practitioner, making no pretensions whatever to surgery, after having been in the profession a score of years, will have treated a number of these cases, occurring at all periods of life, in the weak and in the strong, from childhood to old age, and yet it is rare to see an "unsatisfactory result." Although no plan ever yet devised will maintain absolute immobility or make and sustain extension, fixation being desirable in all fractures, many inventions have been made to establish it in this one. They embrace a vast variety of forms, from simple suspension to a yoke, from binding the arm to the body to merely carrying the hand in the breast of the coat, from a sling made with a handkerchief to the complicated contrivances of Fox and Levis and Dessault. One binds the arm to the side while another encases the shoulder and arm in plaster-of-Paris. Positive immobility, as we have said, has never been attained, and for a useful arm it is not necessary that it should be. Union goes on in the presence of slight motion.

Surgery has also failed to supply in this fracture any satisfactory means of extension. The point of the shoulder can be raised and carried backward and can be secured in this position, but it cannot be drawn outward, the shortening cannot be avoided, the overlapping cannot be overcome, except by means of a solid or semi-solid fulcrum placed in the axilla, whilst the arm is used as a lever: to be efficient it must be forcible. This is not only painful, too torturing to be borne, but it is hazardous to the integrity of the member. Attempts to carry the shoulder from the median line, to overcome an insignificant abridgement in the length of the clavicle, have been abandoned by surgeons generally, most of them, it may be said now, after raising the elbow, fix the arm across the chest by means of adhesive straps.

When it is seen that a useful, an undamaged in function arm is obtained by such simple means, it may well be asked why resort to a practice singularly radical, although so eminent an authority as Langenbeck, assures us that he obtained an "ideal result" in a boy ten years old, "which he treated by cutting down on the seat of fracture, and suturing the ends of the broken bone accurately together with silver wire, and the periosteal sac with catgut sutures." Remarkable would be the case which would justify a resort to such treatment! Again, it may be said that it is doubtful whether silver wires would hold together the fragments of a markedly oblique fracture of the clavicle, they would have to support the weight of the shoulder and resist the action of the great muscles which form the armpit, the pectoral muscles in front, and the latissimus dorsi and its associate behind.

Although the distinguished surgeon obtained an "ideal result," having treated his case antiseptically, "the wires being so twisted that the ends could not perforate the skin," yet it cannot be denied that the conversion of a simple into a complicated fracture is by no means an unimportant, or harmless proceeding, and especially when the wound is made at the base of the neck, in the neighborhood of, we may almost say, vital structures—structures which, if they should share in the inflammatory action, might give rise to consequences the most disastrous.

Third Street and Broadway, Cincinnati.

Iodoform in Extirpation of the Tongue, in Goitre and Buboes.—Nothing could present the happy results more forcibly than the statistics of Billroth's operations for extirpation of carcinomatous tongues. Between 1871 and 1876 the mortality was thirty-two per cent.; in 1877–1880 (fifty-three cases), with irrigations of pot. permanganate solutions, eighteen per cent.; between April and October, 1881, he performed the operation eighteen times, with the same operative technique as before, but with iodoform dressing; result, *eighteen recoveries.*

The course of the recovery presented in no case unfavorable symptoms. Billroth himself ascribes the extraordinary success largely to iodoform. The dressing consisted simply in a piece of iodoform gauze fifteen to twenty ctm. long, containing about one gramme of iodoform, rolled up so as to form a tampon, and pressed into the wound. The tampon was generally renewed in from five to eight days after the operation.

Mosetig is now using iodoform suspended in glycerine as a local injection in the treatment of goitre. It is safe and efficient, he says.

Neumann injects the buboes from a hard chancre with the same liquid; the glands usually become smaller and softer, but the roseola appears invariably in due course. He also gives iodoform in pills, instead of pot. iod. for constitutional syphilis.—*Dr. W. T. Belfield's Vienna Letter to Chicago Medical Examiner.*

Progress of Medical Science.

Condition of the Cerebral Circulation during Cardiac Diastole.—At the session of the Paris Biological Society, held March 25, 1882, M. Franck reported an original experiment, the result of which, if corroborated, will subvert the theory at present accepted in regard to the role of the cephalo-rachidian fluid in cerebral anæmia due to arrest of cardiac action. It is generally assumed, as is well known, that the fluid in question regularly oscillates between the cranial and spinal cavities, filling the vacuum caused in the former by the cardiac diastole and regurgitating into the subarachnoid space within the spinal canal during the systole. M. Franck's experiment consisted in applying an elastic ligature around the superior part of the medulla oblongata, including its meninges. He then removed a portion of the cranium by means of the trephine, and, having caused the heart to cease beating, found the cerebral veins distended with blood. The cerebrum, instead of being retracted and anæmic, was tumefied and congested. M. Franck, therefore, concludes that venous congestion accompanies arterial anæmia, and that the vacuum produced in the cerebral parenchyma by diminution in the calibre of the arterioles is compensated by repletion of the veins and not by afflux of the cephalo-rachidian fluid.—*Le Progrès Medical*, April 1, 1882.

Results of Nerve-Stretching in Locomotor Ataxia and Kindred Diseases.—Dr. Langenbuch has embodied, in a report made to the Medical Society of Berlin, the results of the investigations regarding nerve-stretching, conducted by himself at the Lazarus Hospital, and in private practice. Dr. Langenbuch believes that the operation is entitled to recognition as an established surgical procedure. He admits that the failures have thus far outnumbered the successes attained by the method in question. This result he attributes to the fact that the cases have in many instances not been adapted to the operation, and that faulty methods have been employed in its performance. The object of future investigations should be to discover what cases are best adapted for the successful performance of nerve-stretching; what conditions contra-indicate the operation; under what circumstances slight and powerful traction should respectively be made; whether the sciatic alone or those together with the anterior crural nerves should be stretched, and what the after-treatment should be.—*Berliner klinische Wochenschrift*, March 27, 1882.

Sulphate of Quinine in the Treatment of Glycosuria.—A brief paper on the above subject was read at the London International Medical Congress of last year, by Dr. Jules Worms, and is published in *La France Médicale*, April 6, 1882. The cases of glycosuria in which Dr. Worms obtained good results from the use of quinine, presented no symptoms of any moment, except a moderate quantity of sugar in the urine, with, in some instances, a sense of lassitude and anorexia. The quantity of urine was normal, as was that of urea and uric acid. The patients were usually busily occupied savants, artists, or financiers. They were, as a rule, corpulent and inclined to gout, and suffered from nervous exhaustion. The sulphate of quinine was administered for the purpose of restoring the equilibrium of the vasomotor system, which is theoretically disturbed in glycosuria. The drug was administered continuously for a period varying from fifteen to twenty days in diurnal doses of 0.40 ctgr. (7 grains). The quantity of sugar was markedly diminished in each of the thirty cases thus treated. In one case, which serves as an example, the amount of glucose was diminished, in twenty days, from forty grammes (600 grains) to four grammes (60 grains). This diminution was effected without any interference with the customary diet of the patients.

The Effect of Section of the Pneumogastric upon the Exhalation of Carbonic Dioxide.—M. Grehant recently reported to the Société de Biologie, of Paris, the results of his investigations upon the effect of division of one pneumogastric nerve upon the pulmonary excretion of carbonic dioxide (*La Tribune Médicale*, April 2, 1882). He adopted the plan of passing a given quantity of pure air through the lungs both before and after section of the nerve, and determining the relative amounts of carbonic dioxide contained in each. His carefully conducted experiments led him to the conclusion that division of one pneumogastric has no influence upon the quantity of the gas exhaled.

The Effect of Chloroform on the Nervous Centres.—At a recent session of the Bordeaux Academy of Medicine, the proceedings of which are reported in the *Journal de Médicine de Bordeaux*, April 2, 1882, M. Vulpian opposed the prevalent belief that the involvement of the nerve-centres takes place in a certain orderly and regular sequence. He maintained that all the centres are simultaneously overwhelmed by the anæsthetic, with the exception of the respiratory medullary centre, which alone possesses a somewhat greater power of resistance. M. Vulpian's proofs of this theory, as detailed in the *Journal de Médicine*, seem lacking in conclusiveness.

Trichinæ in Pickled Meats.—M. G. Colin recently reported to the Paris Academy of Sciences the results of his experiments concerning the length of time required by different saline solutions to cause the death of the trichina spiralis. These investigations were undertaken with a view to ascertaining the conditions under which pickled meats may be consumed without danger. M. Colin demonstrated the fact that chloride of sodium kills the trichinæ in two or three weeks. He was unable to find any of the parasites alive in the American pork subjected to critical examination. Samples selected at random from barrels of American pork at Lyons, Paris, and Bordeaux, and taken from the centre of the respective pieces of meat were administered to wrens, mice, and rabbits. None of the trichinæ, however, could be seen to uncoil themselves or to execute appreciable movements after their cysts had been dissolved away by the digestive fluids. The French Chamber of Deputies has recently passed a bill having as its object the abolition of all restrictions upon the importation of American pork, but recommending that all such meat be critically examined.—*Le Courrier Médicale*, April 8, 1882.

The Relations between Nasal Polypi and Asthma.—In the *Archives Générales de Médecine*, April, 1882, Dr. Joal, of Mont-Dore, publishes a lengthy paper upon the relations existing between asthma and polypi of the nasal mucous membrane. Starting with the assumption that asthma is often the result of chronic Schneideritis and coryza, he pro-

ceeds to demonstrate the causative connection between the former disease and nasal polypi. Their etiological relation is definitively established by the fact that many asthmatics affected with polypi are permanently relieved by the removal of the neoplasms. Dr. Joal adduces the histories of eleven cases as evidence that his conclusions are correct. This paper will be continued in a subsequent number of the *Archives Générales de Médecine.*

Koch and the Infective Element in Tuberculosis.—Ever since Villemin, more than fifteen years ago, claimed, as the result of his experiments on the lower animals, that tubercle was a specific disease, due to a special virus, almost endless experiments have been made in different parts of the world to test the validity of his statements. The outcome of their conjoined labors has placed the matter in a somewhat new light, for while it has been determined with great accuracy that the miliary granulum is a product of inflammation, it has also been shown, with about as much certainty, that various organic substances may produce it. and therefore to a certain extent it may be classed among the infective diseases. These results have been derived from the studies of Fox, Sanderson, Clarke, Cohnheim, Salomonsen, and Buhl. Those, however, who, like Cohnheim, Klebs, and Koch, maintain that the tubercle granulum is due solely to the interposition of a specific virus, have naturally hunted for it with their microscopes, but thus far when one has proclaimed a discovery he has obtained little credence, because these alleged discoveries have almost invariably proved premature. The latest announcement comes from Robert Koch, who has recently received an appointment as advisory councillor in the Sanitary Department in Berlin. He claimed by using aniline dyes to have been able to color certain minute bacterial organisms found in tuberculosis, and he is prepared to affirm that they are the essential elements that cause infection.

The dyes in question are methyl-blue and vesuvin, which cause peculiar staining, differentiating them from the ordinary bacteria of decomposition that take a purple color with hæmatoxylon. His method is as follows: A methyl-blue fluid is made, which consists of 1 c.c. of a concentrated alcoholic solution of methyl blue in 200 c.c. of distilled water, to which 0.2 c.c. of a 10 per cent. caustic soda solution has been added. The preparations remain in this mixture from twenty to twenty-four hours, or, if they are kept at a temperature of 104° F. in the water-bath, the time may be reduced to a half hour. Then the same preparations are flooded with a concentrated watery solution of vesuvin, and two minutes later are washed with distilled water. All animal tissues and ordinary bacteria are now said to be stained brown (lepra bacilli excepted), but the tubercular parasite is colored blue.

He further announces that he has been able to isolate these bacteria from the others with which they are found, by successive cultures in the well-known sterilized fluids. He regards these bacteria as different from those that have been described by Klebs, Schuller, or Anfrecht. His experiments have been very numerous.—*Berl. Klin. Woch.*, No. 15, 1882.

Congenital Fistules and Depressions in the Lumbo-Sacral Region.—At a recent meeting of the Société de Chirurgie in Paris, M. Lannelongue read a report upon this subject. He observed that for a long time a more or less considerable depression in the middle of the sacral region has been observed. Feré described nine cases occurring in children. Kuhn thought they indicated the remains of the hydrorachis. Later Monod, Terrilon, Polaillon, Desprès, and others published cases. The researches of M. Lannelongue were made upon children from the age of birth to fifteen years. Sometimes one finds a median fossette in the lower vertebral region, sometimes just below the commencement of the intergluteal cleft, sometimes at the level of the sacro-coccygeal articulation, or even at the apex of the coccyx, within one centimetre of the anus. In 130 subjects M. Lannelongue has found a depression or an infundibulum, more or less marked, in 95 instances. In 29 of these the deformity was located at the commencement of the intergluteal groove; in 38 it was at the level of the sacro-coccygeal articulation. and in 28 at the point of the coccyx. M. Lannelongue does not recognize in these fossettes relics of a posterior umbilicus.—*Courrier Médical*, No. 15, 1882.

Infantile Paresis Treated by Nerve-Stretching.—Dr. R. M. Simon, of Birmingham, has reported one case of infantile paralysis of the right leg, treated by stretching the sciatic nerve. The patient was five years old, and had been under treatment for three years. Though the paralyzed had not kept pace with the healthy limb, there was no actual deformity, and the muscles were fairly nourished. Other muscles than those supplied by the sciatic nerve were found to be affected when tested by forty Leclanché cells. During the latter twelve months no improvement had resulted from the treatment. In walking, the patient used to swing his foot, and brought it to the ground with a jerk, and was apt to fall. Mr. Chavasse cut down upon the right sciatic nerve, under antiseptic precautions, and lifted it three times forcibly from its bed. A good recovery followed the operation, two months after which careful measurements showed a marked improvement, although the patient had suffered in the meantime from diarrhœa and bronchitis. On January 2, 1882, the sound thigh and leg had gained respectively three-fourths and one-eighth inch, and the affected thigh and leg one and one-fourth and three-eighths respectively. He no longer swings his foot forward, and rarely falls.—*British Medical Journal*, February 25, 1882.

Phlebitis, following Typhoid Fever, resulting in Pulmonary Thrombosis.—Dr. Charles Hood has read a paper on the above subject, before the Medical Society of London. His patient was twenty-one years of age, and when admitted to the West London Hospital had been ill three weeks. He had been up and about the wards for a number of days, when he was suddenly seized with intense pain in the splenic region, and elevated temperature followed by symptoms of general phlebitis. An autopsy revealed occlusion of the pulmonary artery. The point of special note was the extremely insidious nature of the attack, and the doctor urged the necessity of careful study when any marked symptom occurred in such cases, in order to insure an early diagnosis. His observations have taught him that excessive pain in the hip, resembling that of rheumatism, often indicates mischief. Remarks made by a member of the society indicated the belief that deep-seated and excessive pain in the calf of the leg during convalescence of typhoid fever, was the first sign of a coagulation that afterward implicated the iliac vessel.—*Lancet*, March 11, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., No. 27 Great Jones St., N. Y.

New York, May 20, 1882.

ABUSES OF MEDICAL CHARITY.

We have received lately, from several medical gentlemen in this city and vicinity, protests against the great abuse of medical charity that is carried on in many of our hospitals and dispensaries. The burden of complaint is that not only are many patients treated in these institutions who can afford to pay moderate fees, but in not a few instances the desire for interesting clinical material on the part of hospital medical attendants is such that special inducements are afforded to patients to submit to free treatment. The consequence is that the rank and file of the profession are suffering to a degree scarcely credible. A surgeon within thirty miles of New York complains that several of his best cases for operation, that is, such as were willing to pay a fee for the same, readily found prominent surgeons in the larger hospitals who were willing to render their services for nothing. On the other hand, a competent young medical man in the city, willing to take any fee, however small, states that in consequence of his proximity to a medical college and widely-known dispensary, he is literally without anything to do. Of course this is an old story, but each sufferer has a grim satisfaction in applying it to his own experiences in the hope—almost vain—of finding some remedy. We all know that it is altogether unnecessary to dispense medical services gratuitously, and yet we fail to reason together as to how it may be stopped. We are all aware that there is no good reason why we should give our advice to people even when they are very poor, save that, like good Samaritans, we are willing to help them. And yet there is no other profession, calling, or trade that does likewise. Even the clergyman gets paid by some one for preaching, the lawyer obtains his fee from the poorest thief, and certainly the butcher and baker do not keep open houses for even those who are "a hungered." The pity for the poor is one-sided in the case of the doctor, and he is the only one, apparently, who suffers from its exercise. A surgeon connected for years with several of our large hospitals, who was never known to refuse professional attendance upon "the pilgrim and the stranger," died recently and left his family virtually destitute. This is certainly a poor reward for charity—a poor return for so much of service that ungrudgingly given to the poor. An active surgeon in a hospital estimated that in operations and surgical attendance upon paupers in the wards, he had given time and labor in one year equivalent to twenty thousand dollars. Of course a good deal of this work is offset by valuable experience gained, but the major part is abstract drudgery.

We cannot, however, change this state of things now, if we would. The truth is medical service to the really poor can always be obtained in hospitals. But beyond this it is not necessary that we should go. The complaint is that such services are constantly extended to those who can pay something for the same. This certainly should not be. A physician in this city, who, as a general practitioner, deals with all classes, gets at one of the practical solutions of this question by insisting upon some fee from the poorest of his patients. No matter how small from each individual, in the aggregate it amounts to considerable. We cannot blame the hospitals for the general work they do. These institutions are created and supported for these purposes, but there is a way to limit the good offices to the suitable cases. On general principles the less that is done even in these infirmaries in a purely gratuitous way, the better for the really poor, the better for the institution, and the better for the profession. The medical practitioner cannot blame a patient for applying to a hospital, when by so doing he can get advice and treatment free. The ordinary patient will obtain this advantage over the doctor whenever he can. There is no way of checking this abuse, save by active interference of the hospital authorities, whose business it should be either to refuse services to all patients able to pay for the same, or charge them to the extent of their pecuniary ability.

It must be admitted, however, in extenuation of these abuses, that the hospitals have grown into this lax way of doing business simply because medical men have shown the example. It seems high time that a proper sentiment should be created in the profession in regard to the rendering of gratuitous services. We all do too much for nothing, and are too apt to give those who impose upon us the benefit of a doubt as to their ability to pay. The butcher and grocer never do it, and yet the poor man's life may be more dependent upon food than on medicine. It is so easy for the doctor to assume the position above that of taking a small fee, that the man who should and would pay him often escapes.

In no way, perhaps, is medical charity abused more than by those patients who come from the

country for free treatment here. Most of them have an idea that they are specially entitled to such privileges, and do not hesitate to cheat their doctor at home for the purpose of obtaining the advice of some hospital or college man in New York.

Still the proportion of pecuniarily able patients that come here for free advice is, we have reason to believe, much less than formerly. In many of our hospitals each patient is questioned before admission as to his ability to pay, and many of the dispensaries exact a small fee, even from the poor, before services are rendered; hospital attendants charge for services rendered to patients who can afford to pay for them; and there appears to be a growing disposition to elevate even public medical services to some tangible pecuniary level. The more this is done the more will the younger practitioner in this city and vicinity be benefited. Let us hope, in the interests of all, that while the really poor may always claim our services gratuitously, those who can afford to pay, even ever so little, should be compelled to do so, whether in or out of the hospital. The out-of-town practitioner can do considerable to this end by advising his patient as to the consultant to be employed, and informing the latter of the pecuniary means of the patient. To allow such patients to drift indiscriminately into dispensaries, clinics, and hospitals, is to encourage indirectly one of the greatest abuses of medical charity, and yet the very practitioners who are apt to complain the most against the abuse take not the easy means of preventing it.

It may not be generally known that an association—the Charity Organization Society—has been formed in this city, one of the aims of which is to prevent not only the treatment of unworthy cases in hospital, but to render impossible the system of repeating so common among designing paupers. With little trouble every public institution could be furnished with a black-list, and the managers of each could intelligently guard against the commoner frauds which infest the wards, and which indirectly cheat the poor doctor of his legitimate fees. We are glad to learn that this society is substantially supported by our best citizens, and promises to be a working power in systematizing the distribution of charities of every sort, not the least of which will be the proper care of the sick poor, and the consequent correction of many of the grosser abuses connected with gratuitous medical services. Consequently the profession should use its influence in the direction of furthering the aims of the organization in every way in its power.

KOCH'S DISCOVERY OF A TUBERCULAR PARASITE.

A PAPER recently read by Dr. Robert Koch before the Berlin Physiological Society has attracted wide attention. Dr. Koch here makes some very positive announcements regarding the etiology of tuberculosis. Whether his views and conclusions be right or not, the facts that he relates are novel and interesting.

By staining sections of tuberculous tissue with an alkaline solution of methyl-blue and then with vesuvin, he has been able to see in all true tubercles a minute bacillus. It is rod-shaped, and from one-fourth to one-half the length of a red blood-corpuscle. It resembles closely the bacillus lepræ, but is not so thin, is slightly split at the end, and colors somewhat differently. These bacilli seem to make their way first into the wandering cells. By infiltrating, surrounding, and irritating them, the gray tubercles develop. The tubercles form about the bacillus as galls about the insects' poisons.

Koch claims a positive universality for these organisms in all tuberculous tissues. It is, he thinks, the organized virus of tuberculosis which Cohnheim and others have despaired of finding. The evidence which he gives for this universality is as follows:

In eleven cases of miliary tuberculosis, the bacillus was always found; in twelve cases of caseous pneumonia, in one of tuberculosis of the brain, in two of intestinal tuberculosis, in three of freshly extirpated scrofulous glands, and in four of fungous joints, the organism was also uniformly present. Among lower animals, the bacillus was discovered in ten cases of pearl-disease; in the caseous cervical gland of a pig, in the organs of a hen dead from general tuberculosis, and in three monkeys, nine guinea-pigs, and seven rabbits. The bacillus was inoculated in 172 guinea-pigs, 32 rabbits, and 5 cats. In all cases the animals died of tuberculosis and the organism was found in their tissues. The organism was not found in non-tuberculous or non-scrofulous tissues.

Koch, having found the bacillus so uniformly present, next addressed himself to the question whether it was an accident or cause. To test this he undertook to cultivate the bacilli apart from the tissues in which they normally lay. He prepared a special cultivating substance out of the serum of ox blood. This serum was heated several times up to 58° C. in order to destroy all organisms. It was then heated again up to 75° C. until it was reduced to the consistency of a brownish-yellow transparent jelly. The bacilli were cultivated in cells upon this. They gave off two or three spores, which developed to rod-bacilli. The development was very slow, requiring many days. The bacilli were apparently motionless. They would only grow at a temperature between 30° and 41° C., in this respect differing from anthrax bacilli.

The cultivations were continued many days, and were repeated several times. Early and later generations were then carefully injected into the peritoneal cavity, or anterior chamber, or veins of healthy animals. In almost all cases they caused a true tuberculosis. Over sixty different animals were tried. The culture-fluid without the bacilli was injected, but produced no results.

As further evidence of the relation between the bacillus and tuberculosis, Koch states that in the sputa of the phthisical the bacilli are always found, but not in that from ordinary bronchitis.

Koch's conclusions are very positive to the effect that the bacillus is the cause of tuberculosis, by which term he includes both scrofulous or catarrhal phthisis and tuberculous disease proper.

He explains the phenomena of the gradual development of phthisis by the slow and peculiar development of the organisms.

The source of these organisms, he thinks, must be from animal life, since they cannot live long at other temperatures. Dr. Koch believes that tuberculosis is a contagious disease, and that the sputa and exhalations of the phthisical are dangerous. He also believes the milk and flesh of tuberculous cows to be a source of danger. The idea dwelt upon by Professor Tyndall, in his letter to the *London Times*, that the bacilli can be modified by cultivation till they become prophylactic, is hardly broached by Koch, and must at this stage of our knowledge be considered as rather sensational.

The above is a brief account of Koch's experiments and conclusions. They have excited much more talk and attention than at present they seem to deserve. We confess to some scepticism regards the facts, and still more in regard to their "far-reaching significance." Some attempts have already been made in this city to see the bacilli by Koch's method, but as yet without success. Others, like Baumgarten, find bacteria in tubercle, but not those described by Koch, which are already facetiously known in pathological circles as "Koch's bugs."

The practical conclusions that we must especially guard against the disease by disinfecting the sputa and breath of the phthisical, and by avoiding the disease or its products in lower animals, are so at variance with what most previous experience has taught, that the profession will demand much further explanation and confirmation before such views are accepted.

THE GARFIELD MEMORIAL HOSPITAL.

The progress that is being made in the plan for erecting a Garfield Memorial Hospital has been duly chronicled in this journal. The project was conceived a short time after the President's death, and it then met with an enthusiastic reception. The reasons for the establishment of such a hospital are now as strong as ever. Good progress in the subscription of money has also been made. Unfortunately, however, Garfield has now been dead eight months. Already he is beginning to be forgotten, and the Stalwarts—his political antagonists—rule the country. Consequently those who are working for the hospital find some lack of interest if not actual opposition, in some quarters, against which to contend.

The ambitious but careful politician does not wish to offend the Stalwart living by too loudly glorifying the anti-Stalwart dead.

It is not much that the medical profession can do in a measure that requires Congressional aid, but we can, at least, assert it as the universal sentiment of American physicians that such a memorial to Garfield is a most worthy one, being at once a noble monument to the dead and an institution greatly needed for the living. Washington is a large city, containing about one hundred and fifty thousand inhabitants, yet it has no general non-sectarian hospital, one which will receive and treat patients at any time and of any class. There are many strangers constantly drifting to Washington, and thousands of Government clerks scattered throughout the city, who are often in great need of advantages which a large, well-equipped hospital could afford.

There is every reason, therefore—patriotic and humanitarian—that the Garfield Memorial Hospital should be established on a permanent footing. So far, the medical profession has everywhere endorsed the project. We trust that it will use its influence in the future to press the matter forward. The hospital cannot be built and sustained by Washington alone, nor should it be so. It is to be a monument to the nation's dead President, and it is to treat and care for strangers almost, if not quite, as much as natives. Let those who are working for it, therefore, have the hearty support of the medical profession.

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-third Annual Session, held at Titusville, Crawford County, May 10th, 11th, and 12th.

(Special Report for THE MEDICAL RECORD.)

FIRST DAY.—WEDNESDAY, MAY 10, 1882.

THE meeting was opened with the usual formalities, and among the items of business the following is of importance to the profession at large:

THE NEW CODE.

PROFESSOR HENRY H. SMITH, of Philadelphia, offered a resolution disapproving of the action of the New York State Medical Society, in reference to the ethics of consultation, also a resolution requesting the delegates from the Medical Society of Pennsylvania to the American Medical Association to enter an *early protest* against the admission of delegates from any society which does not adhere to the code of ethics as at present existing. A resolution of similar import from the Philadelphia County Medical Society was also read.

Remarks in support of Dr. Smith's resolutions were made by Drs. A. Hewson, of Philadelphia; Stewart, of Erie; J. L. Atlee, of Lancaster; Traill Green, of Easton, and others, after which the resolution was unanimously adopted.

AFTERNOON SESSION.

THE ADDRESS IN OBSTETRICS,

prepared by Dr. R. S. Sutton, of Pittsburgh, was read. It gave a succinct account of the present condition of

ABDOMINAL SURGERY IN EUROPE.

Descriptions were given of the method of operating adopted by some of the prominent surgeons on the Continent of Europe. The elaborate and accurate method of Billroth was especially noticed. The antiseptic system was employed, and the operation always done about nine o'clock in the morning. The assistants are skilfully disciplined. For anæsthesia a mixture of one hundred parts of chloroform and thirty parts each of ether and alcohol is used. A memorandum is made of the number of sponges used, and before the abdominal incision is sewed up the sponges are carefully counted to make sure that none of them have been left in the cavity. Most of the operations are entirely complete within thirty minutes.

Professor Nussbaum uses the antiseptic method fully, and in addition to the carbolic solution, introduces iodoform into the abdomen. Dr. Sutton saw him perform his 334th ovariotomy. Professor Shroeder, of Berlin, also uses the antiseptics, and also pays great attention to general cleanliness. He uses but four instruments, and on one occasion he performed three operations in ninety minutes.

THE COMMUNE OF GHEEL.

DR. S. S. SHULTZ, of Danville, read an account of the Commune of Gheel, in Belgium, in which the cottage system of caring for the insane is in operation. Gheel is about seven miles square, and its inhabitants are chiefly engaged in the work of farming or of making lace. A historical note was read, showing the religious origin of the present system of caring for the insane. The commune is divided into four divisions, each division being assigned to a special class of insane. Dr. Schultz's opinions were the result of a visit to the colony, and were unfavorable to the system. Travellers generally, he said, were loud in their praises of the method, but that was because they saw it only under favorable conditions. Whatever success the method had was due to the fact that the long course of years in which the system had been in use had developed a race of highly trained nurses, and this was, of course, a most valuable adjunct in any treatment. The cottage life might be supposed to have charms, so, indeed, it had, but not when the resident patient is under a continual espionage.

Gheel is under Government control. Some account is given of the rules and regulations of the colony.

OLEATES IN SKIN DISEASE.

DR. JOHN V. SHOEMAKER, of Philadelphia, presented a series of oleates, and ointments prepared from them. He called attention to the fact that most of the older forms of oleates were compounds of indefinite character, but the present preparations were made by decomposing the sodium oleate by a solution of various salts, and were constant in composition. He detailed the therapeutic uses of the preparations, laying special emphasis upon the copper oleate for use in parasitic affections. Other valuable oleates were arsenic oleate and iron oleate.

THE UNNECESSARY FEAR OF DISEASE.

DR. TRAILL GREEN, of Easton, read a paper upon the importance of physicians exerting themselves to allay the unnecessary fear of disease which was common among the laity. Infantile diseases, he thought, were greatly overrated in their danger, and he leaned to the opinion that they were rather beneficial than otherwise. He also alluded to the absurdity of some of the views in regard to methods of transmission of disease.

THE TREATMENT OF PROCIDENTIA.

DR. E. E. MONTGOMERY, of Philadelphia, read a paper discussing the causes and operative treatment of procidentia.

An interesting paper on

HOMICIDAL STATISTICS

was read by Dr. J. G. Lee, of Philadelphia. It was a digest of the record of the cases of murder during the years from 1871 to 1881 in Philadelphia. In these ten years the ratio of death by violence to the total number of inquests was twenty-seven per thousand, the greater proportion being white males of from twenty to thirty years of age. The fewest violent deaths occur in the very young and very old. Very few cases of poisoning are recorded among the fourteen varieties of killing noted. More wives are killed than husbands. July is the month most frequent in homicides, March the least. Dr. Lee alluded to the necessity of better instruction in jurisprudence.

SECOND DAY.—THURSDAY, MAY 11, 1882.

DEFECTIVE HEARING IN LOCOMOTIVE ENGINEERS.

DR. C. S. TURNBULL presented a report setting forth peculiar defects in the hearing of locomotive engineers, and urging the importance of careful examination of such persons in reference to their delicacy of hearing.

The address in

MENTAL DISEASES

was delivered by Dr. C. K. Mills, of Philadelphia. It was a dissertation upon some of the prominent topics in criminal lunacy, the case of Guiteau being used to illustrate and emphasize the points advanced. The speaker thought that the weight of evidence was in favor of the theory of Guiteau's insanity. In this connection, the questions of the relations of crime to insanity, and also the test of the responsibility of criminals and the appropriate disposal of the criminal insane were discussed. Dr. Mills did not favor capital punishment of insane murderers, but believed it would be better for some grade of punishment to attach to certain forms of such crimes. If Guiteau was executed bearing the air of a martyr and hero, the example would be pernicious, and might excite other criminals to acts of violence. A provision such as to make an act of homicidal insanity punishable by imprisonment in a lunatic asylum for a term of years, and leaving it to juries to make this as long as they think fit, was suggested. The speaker thought that the community was not at present sufficiently protected against the many cranks and eccentrics now loose in society. He insisted that a large community like Pennsylvania required at least one asylum for the criminal insane.

DR. WM. H. DALY, of Pittsburgh, in a paper on

TONSILLOTOMY,

urged the importance of the operation as a measure of relief, and expressed his firm opinion that the excision of the tonsils has no effect upon virility, as some have stated. He preferred the knife to either caus-

tics or electro-cautery. The bleeding is not usually serious, but one should be prepared for all emergencies. After excision but little tendency is shown toward a return of the enlargement, and this can generally be kept in check by local treatment.

Dr. Lippincott, of Pittsburgh, discussed the subject of

ABSCESS OF THE ORBIT,

and especially the differential diagnosis between abscess of the cellular tissue and periostitis. He also pointed out that sudden anastomotic aneurism had been mistaken for abscess. He recommended cautious exploration with an aspirating needle. The direction of the exophthalmus was also an important point.

Dr. Charles S. Turnbull, of Philadelphia, read a paper on the employment of powdered boracic acid in otorrhœa. He said he had discontinued syringing in these cases and also the use of iodoform. He now used boracic acid in the form of impalpable powder, packed into the meatus and allowed to remain as long as it would. He found its action to be very satisfactory and it never gave any trouble. The crystals would not suffice, only the fine powder should be used.

Dr. Edward J. Jackson, of Westchester, presented a paper on the

COMPARATIVE ACTION OF CERTAIN MYDRIATIC ALKALOIDS,

being an experimental study of those in common use. Details were given and charts exhibited showing the special physiological action of the different substances.

Dr. Joseph Hearn, of Philadelphia, presented a paper on

RODENT ULCER.

He pointed out that these ulcers are frequently of a malignant nature, and require treatment by strong cauterization. He referred to the sodium ethylate as having shown, in his experience, the special property of destroying abnormal tissue with more vigor than normal, and hence of great use in cases where a moderate amount of destruction was required. Dr. Hearn, however, in cases of rodent ulcer of marked character preferred to secure an extended cauterant action, and therefore used the caustic potash.

AFTERNOON SESSION.

THE ADDRESS ON HYGIENE

by Dr. William F. Muhlenberg, of Reading, was a succinct and interesting account of the more recent researches on germs and of the methods of propagating them in culture fluids. An assortment of photographs of microscopic views of various bacteria and other growths were shown. The speaker also discussed the question of the presence of phenol and similar bodies among the products of decay. He also described the four forms of bacteria, and gave various methods of preparing, examining, mounting, and preserving the specimens. The distinction between germs and various bodies such as epithelia, pus-cells, etc., was given at some length.

Dr. William S. Little, of Philadelphia, read a paper on

SUBJECTIVE TRAUMATISM OF THE EYE,

being a consideration of the injury which may result to the eye from the irritative action of its own optical defects. A perfect eye, he said, would be much less exposed to the danger of sympathetic ophthalmia than a defective eye, for the latter would have a continuing irritation. In cases, therefore, where sympathetic ophthalmia was feared, attention should be given to the early correction of the optical defects by means of glasses, etc. The emmetropic eye is found to be more amenable to treatment than the defective eye, obviously because of the absence of the subjective traumatism.

Dr. Henry Leffmann, of Philadelphia, read a paper on the

MEDICAL RELATIONS OF COMMON FOOD ADULTERATIONS.

It was pointed out that the general nature of adulterations was such as gave little fear of active injury. Most adulterations were cheats rather than poisons. Glucose and oleomargarine were especially spoken of as being so near in composition and properties to the bodies for which they are used as substitutes as to set aside all doubts of their general usefulness. The adulteration of candies was touched upon and the speaker stated that he had not been able to find objectionable colors to any extent in them, except in the yellow candies, in which lead chromate was often used. Starch and plaster-of-Paris were largely employed as make-weights. The use of glucose as a substitute for malt was enterely unobjectionable, and the author closed his paper by stating his conviction that at present no necessity existed for the passage of laws relating to food adulteration, nor for the establishing of any official investigation.

Dr. B. C. Mossmann, of Greenville, read a paper on

PUERPERAL MALARIAL FEVER,

being an account of the symptoms, treatment, etc., of malarial fever occurring in lying-in women. Dr. Mossmann pointed out the importance of recognizing this form of disease, as the therapeutics and prognosis are so much more satisfactory than in other puerperal affections of similar nature. An early diagnosis will, therefore, prevent much alarm and anxiety. Cases were given illustrative of the clinical history of the disease. The differential diagnosis between it and puerperal fever is sometimes difficult. The latter, however, usually begins on the second or third day, while the malarial disease is later.

Dr. Carl Seiler, of Philadelphia, gave descriptions of the method of

INTRA-NASAL SURGERY

by means of the galvano-cautery. Dr. Seiler illustrated his remarks by the exhibition of various forms of batteries and electro-motors. He explained that, in using the galvano-cautery, the wire should not be too highly heated. A cherry-red heat was the best, and in this condition would cause no pain or hemorrhage. By means of the apparatus shown, operations for the removal of hypertrophied nasal mucous-membrane could be rapidly and conveniently performed.

THIRD DAY.—FRIDAY, MAY 12, 1882.

Dr. E. Griswold, of Sharon, detailed some cases of

HERNIOTOMY,

and urged the importance of the operation. He stated his belief that many patients are allowed to die from strangulated hernia with whom a prompt recognition of the disease and operation would save life. He alluded to the general subject of hernia and said that trusses were never perfect cures, and even if they were, certain classes of cases were not

suited for them. The diagnosis of strangulated hernia was, in his opinion, sure if proper examination was made.

Dr. John B. Roberts, of Philadelphia, presented a note on

THE EXCISION OF CARTILAGE IN NASAL OBSTRUCTION FROM DEVIATED SEPTUM.

He stated his belief that the usual statement that the septum should not be completely cut through was based upon mistake, and he recommended for the relief of obstructive deviations the excision by means of a specially constructed nasal punch, which was exhibited, of an elliptical piece of cartilage, about one-half inch long by one-fourth inch broad. This was too large to produce whistling sounds and not large enough to be ordinarily visible.

Dr. William Varian, of Titusville, read a note on

A CASE OF OVARIOTOMY,

the principal interest in which was the fact that he at first diagnosed fibroid tumor of the uterus. The tumor subsequently increased markedly in size, and was removed, when it was found to be a polycyst of great size with a genuine fibroid mass on one side. Dr. Varian detailed the method of operating and the character of the tumor at length, and advanced the idea that the growth had started as a fibroid and degenerated. He suggested that such might be the common history of ovarian fibroids, that their rarity might be explained by the fact that operation was rarely resorted to until they became cystic.

After reading a few papers by titles, the society adjourned, to meet at Norristown, in May, 1883.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 22, 1882.

Dr. E. C. Seguin, President, in the Chair.

ANEURISM OF THE COMMON CAROTID ARTERY—PUNCTURE OF THE ARTERY WITH AN ANEURISM NEEDLE.

Dr. A. G. Gerster presented a patient with the following history: A man, forty-six years of age, and a carpenter, noticed seven months ago, for the first time, a swelling on the left side of the neck. He also observed that the swelling pulsated quite distinctly, otherwise it caused no discomfort. He continued to work at his trade until about two months ago when he discovered that he was losing flesh and strength rapidly, and presented himself at the German Dispensary for treatment. Dr. Gerster then diagnosticated aneurism of the common carotid artery, and advised an operation. There was no history of syphilis. The tumor was about the size of a pigeon's egg, and pulsating. For unavoidable reasons the patient did not present himself for further treatment until four weeks subsequently, and it was then found that the aneurism had increased to the size of an ordinary goose-egg. The patient was then sent to the German Hospital, where Dr. Gerster ligated the common carotid artery on March 2, 1882. After the artery was tied, pulsation in the tumor ceased as usual, and the wound healed by first intention.

He reported the case with special reference to an accident which occurred during the operation. The artery was exposed easily, and was found to be healthy. It was necessary, on account of the extension of the disease, to apply the ligature between the two heads of the sterno-cleido-mastoid muscle. For the ligature he used an E violin string that had been seasoned two years in a ten per cent. solution of carbolized oil. After making an incision in the sheath of the artery, he introduced an aneurism needle—such as usually was sold in the shops—with which to make a groove for the ligature behind the vessel. For this purpose he ordinarily uses a strong silver probe, but a suitable probe not being at hand, he employed an aneurism needle, and suddenly arterial blood spurted out of the wound. At first he thought he had wounded the jugular vein, and he seized the artery and pulled it to one side for purposes of inspection, and found the vein was uninjured, but that the point of the needle had penetrated the wall of the artery, making a longitudinal opening, so that as soon as the vessel was stretched the hemorrhage ceased. He then used a silver probe, loosened the artery from the vessel behind it, and applied a ligature above and below the opening in the artery. The subsequent progress of the case was without accident or serious complication. Exceedingly profuse general perspiration occurred, apparently due to the operation, as it appeared immediately afterward, and continued forty-eight hours. A few doses of belladonna were given and it ceased. There were no other nervous symptoms whatever following the operation.

The President referred to the fact that surgeons had refused to ligate the common carotid artery in persons over forty-five years of age, because of the danger of softening of the brain caused by lack of collateral circulation if the communicating arteries are atheromatous; a frequent condition after that period of life.

Dr. Gerster said that he was aware of that fact, but the necessity for incurring the risk was made prominent in this case because the aneurism was threatening to burst at any moment. The dangers and the liabilities were fully stated to the patient, and he was willing to take the risk attending an operation.

CARCINOMA OF THE PHARYNX AND LARYNX WITH DIPHTHERIA.

Dr. George L. Peabody presented a specimen with the following history:

C. H. O——, a native of the United States, unmarried, of no occupation, entered the New York Hospital on January 12, 1881. During the past year he has had an ulceration involving the left side of the pharynx and extending into the larynx. His chief symptoms have been gradually increasing difficulty in swallowing and speaking. This morning he had a severe attack of dyspnœa, which led him to undergo laryngoscopic examination. At this examination the fact was revealed that the rima glottidis was reduced to one-eighth of its normal size, and that there was œdema of the false vocal cords, and that the true cord of the left side was rigid and was infiltrated with the neoplasm.

On admission the patient was found to be well nourished. There was considerable congestion about the face and neck. He was able to speak only in a hoarse whisper. He swallowed with difficulty, and had occasional severe attacks of dyspnœa. At 10.30 P.M. on the night of his admission tracheotomy was performed below the isthmus of the thyroid. An hour later his pulse was 92, respiration was 24, and his temperature 102° F. On the following morning his pulse, respiration, and temperature were about the same. During the afternoon his temperature rose to 104°, he became restless, coughed a great deal, and in the evening he had œdema of the lungs. Notwithstanding the vigorous application of all the usual remedies, his pulse and respiration increased

rapidly in frequency and he died at 8.50 A.M., January 14th, thirty-four hours after the operation.

Autopsy, fourteen hours after death. There is an irregular ulceration situated on the left side of the throat involving both the larynx and pharynx. It begins at the tip of the arytenoid cartilage below, and follows the course of the aryteno-epiglottic ligament, which it involves, as it does also the left side and posterior surface of the epiglottis. It terminates superiorly on a level with the hyoepiglottic ligament. The vertical diameter is about one inch. In this situation it fills the laryngeal pouch anteriorly; posteriorly it involves the wall of the pharynx to within half an inch of the median line. Although the antero-posterior diameter of this neoplasm is found to be but five-eighths of an inch, it produces very considerable narrowing of the pharynx; and involving, as it does, both the laryngeal and pharyngeal walls, it prevents the epiglottis from closing and protecting the entrance to the larynx.

There is also a thick coating of false membranes over the posterior surface of the epiglottis, extending thence into the larynx, covering both the false and true cords. It passes on, lining the trachea and bronchi of the left lung as far as they can be traced. In the right lung the bronchi are not merely lined, but are actually filled by this false membrane as far as they can be traced. In the bronchi it is easily separated from the mucous membrane, this latter then appearing in a condition of intense congestion.

The lungs were intensely congested and œdematous.

The other organs were substantially normal.

On *microscopic examination* the new-growth proved to be an ordinary carcinoma, in which the stroma was not very abundant.

Dr. Peabody also presented a specimen of

ANEURISM OF THE HEART,

accompanied by the following history:

D. D——, aged fifty-three; United States; married; customs inspector; was admitted to New York Hospital, March 10, 1882. His family history is negative, except that he has a daughter who is rheumatic. Formerly he was a free drinker, but has been reasonably abstemious of late years. Has always been healthy until three years ago, when he had rheumatism for the first time. Three weeks ago he began to suffer from dyspnœa, which would occasionally awaken him at night, and finally caused complete orthopnœa. Ten days later his feet began to swell, and he noticed that he was increasing in girth. For the past few days dyspnœa has been so severe that he has been obliged to sit up all night, leaning forward over the back of a chair. His bowels have been regular. There has been no disturbance of micturition. There has been occasional vertigo, but no vomiting, headache, muscæ volitantes, or tinnitus aurium.

On admission he is seen to be of large build and very stout. There is considerable œdema of the lower extremities, and some ascites. He is very anæmic; his face is cyanotic; respirations rapid and labored; skin dry. The area of cardiac dulness is obscured by the thickness of the chest-walls. Fluid was made out in the right chest, and twenty ounces of serum were withdrawn by an aspirator. After this his chest was vigorously cupped, and he was given quebracho dialysate. This procedure seemed to bring him some relief, but he still preferred to sit in a chair.

He passed a fair night. During the night he had four motions and passed eight ounces of urine. Examination of this revealed the following: Specific gravity, 1019; a large amount of albumen; many large and small hyaline casts. He continued to suffer intensely from dyspnœa. There was no elevation of temperature. He was given oxygen gas, brandy, and digitalis; and his chest was thoroughly cupped. On the next day his condition was practically unchanged.

On the 13th his mind seemed to wander. He grew steadily weaker, with no marked change in his symptoms, and died suddenly at 8.20 A.M. with a temperature of 100.8° F.

The heart's action was always very feeble and irregular, but at no time was a murmur detected.

Autopsy.—Seven hours after death, body very large and fat, œdema of lower extremities. No fluid in peritoneum. Diaphragm stands on a level with the fourth intercostal space on the right side; one space lower on the left.

Thorax.—There is no fluid on either side. The heart, of enormous size, is entirely uncovered by lung. On opening the pericardial sac the visceral and parietal layers are found everywhere united by recent adhesions, except over the posterior surface of the left ventricle. These adhesions everywhere contain blood; and just behind the left ventricle there is a mass of recently coagulated blood, about as large as a hen's egg. The adhesions are somewhat firmer over the anterior wall of the left ventricle than elsewhere, particularly over the apex. On separating these adhesions there are found to be two situations in the left ventricle where the muscular tissue is entirely absent. One of these is situated at about the middle of the anterior wall of the ventricle, oval in shape, with a long vertical diameter of six centimetres, and a short lateral diameter of three centimetres. Over this oval area the pericardium is adherent to a large clot of laminated fibrin, which is contained within the cavity of the ventricle. The other opening in the ventricular walls is linear in shape, with ragged edges, and is situated in the left border of the ventricle about midway between the apex and the site of the mitral valve. Its length is three centimetres. The anterior wall of the left ventricle is everywhere extremely thin, and shades off gradually as the openings are approached. The laminated clot is spheroidal in shape with a diameter of seven centimetres. It fills the left ventricle from the apex to a point within two centimetres of the attached border of the aortic valve. Over a large part of its area this clot is adherent to the muscular wall of the ventricle; and also to the pericardium over the oval area where the wall of the ventricle is absent. The valves are everywhere competent. The aorta is atheromatous. The right ventricle is dilated and its muscular wall is very thin. There is a layer of fat nearly a centimetre thick over its posterior wall. The coronary arteries as far as they can be traced are normal. The weight of the heart is 970 grammes.

Kidneys.—Left capsule is adherent in places, surface granular, cortex extremely thin, and its markings obscure. Cerate of soda is seen in tubes of pyramids. In the right kidney the same conditions prevail, except that the cortex is more extensively atrophied.

Stomach is intensely congested.

Intestines are in the same condition.

Liver.—The centres of the acini are pigmented; there is anæmia with increased connective tissue at their periphery.

Brain.—There is a small patch of atheroma in the wall of the basilar artery. The brain is anæmic, but otherwise normal.

Microscopic examination of the liver served merely to confirm the naked eye diagnosis. The *kidneys* showed marked atrophy of many Malpighian bodies: many hyaline casts, and much fatty epithelium in the straight tubes. The *heart* showed much fat in the fibres of the papillary muscles of the left ventricle. The fibres of the left ventricle are in many places broken down, and there are diffluent masses of minute oil globules apparently lying in the meshes of fibrous tissue. The muscular fibres of the wall of the right ventricle contain an excess of fat, but the transverse striæ are to be seen in some places.

Dr. Gerster presented specimens as follows:

EXSECTION OF THE HEAD OF THE HUMERUS.]

The first consisted of the head of the humerus, with a portion of the diaphysis removed by exsection eight weeks ago at the German Dispensary, from a child eighteen months old. The child's grandmother is under treatment for syphilis. The father of the child died of consumption two years ago. Without known cause, inflammation of the left shoulder-joint developed, and, in the course of time, five fistulæ were formed, and local treatment was of no avail. Before Dr. Gerster saw the child, a surgeon had scraped out the diseased bone and said that the joint was not affected. Dr. Gerster exsected one and one-fourth inch below the upper epiphysis of the humerus, where spontaneous lysis had occurred. The remnant of the head of the humerus was attached to the glenoid cavity. The diaphysis was freely movable in the space at the line of lysis. The diseased portion of bone was exposed, and it was found that about one inch in extent was involved, which was removed. The general condition of the patient began to improve immediately, and the fistulæ healed spontaneously. The incision healed by first intention. The child is now using its arm freely, and abduction is possible to 28 or 30 degrees.

EXSECTION OF THE ELBOW-JOINT.

Dr. Gerster presented three specimens with reference to the above operation.

Case I.—A girl, twelve years of age, fell and struck upon the elbow, but did not think that she was much injured. Three days afterward, she began to feel sick, had considerable fever, and pain in the elbow-joint, and was unable to use the limb. The family physician ordered cold applications, and the joint was fixed by means of a splint. But the case went from bad to worse, there was continued fever, and the joint assumed a spindle-shaped appearance, and when Dr. Gerster saw the case he diagnosticated serious organic disease of the articulation, basing his opinion upon functional disability, the general spindle-shaped contour of the limb, elevation of body temperature, with marked exacerbation at night. He advised immediate incision, for the purpose of determining, if possible, what was the cause of the constitutional disturbance. He believes that early is no more dangerous than late interference, and it promises better results, because the necessity for removing large portions of the bony structure of the joint is obviated. Accordingly he performed exsection *five weeks* after the injury. The changes which had occurred in the soft parts were very marked. The entire capsule, all the ligaments, even the annular ligament of the radius not usually involved, were transformed into a gelatinous mass, characteristic of fully developed cases of this class. Within the joint a small sequestrum was found which belonged to the end of the olecranon, and doubtless was chipped off at the time of the fall, and gave rise to the trouble which followed. This was removed, together with the tip of the olecranon, which had begun to undergo dry carious change. The gelatinous tissue was dissected away as much as could be done safely, the wound was sewed up with catgut, and two button-hole incisions made, one upon the radial, the other upon the ulnar side, for the insertion of drainage-tubes, simply to reach just within the capsule. Four days after the operation the drainage-tubes were shortened still more, and three days later they were withdrawn altogether. The wound healed by first intention. The case progressed favorably from the beginning, and at the end of thirteen days passive motion was commenced. The operation was performed according to Langenbeck's method.

Case II.—A laboring man, twenty-two years of age, fell and struck upon the elbow. The joint swelled, was painful, synovitis occurred, which continued until chronic synovitis of a fungous character developed, and, nine weeks after the injury, a fistula existed upon the inner aspect of the elbow-joint. The specimen showed that the articular cartilage had been entirely destroyed. Exsection was performed according to Langenbeck's method, but the subsequent progress was not so favorable as in the first case. A considerable portion of the periosteum necrosed, which required frequent irrigation of the wound and a partial opening up of the first long incision upon the posterior aspect of the limb. There were five drainage-tubes leading into the cavity, and Dr. Gerster anticipated that finally the man would have a useful joint.

Case III.—A man, twenty-six years of age, bruised his left arm, in consequence of which he was compelled to leave his work, but two days subsequently he felt as well as usual, and returned to his labor. Soon afterward he was taken suddenly with a chill, lasting five hours, and severe pain in the humerus. His home being in New Haven, he went there and called his family physician, who regarded the case as one of acute articular rheumatism and treated it accordingly. After ten days the physician said that the case was complicated by typhoid fever. The elbow- and shoulder-joints were swollen, the tongue dry, and prostration marked. The patient continued in this condition for six weeks, and became very much emaciated. Finally he came to New York and presented himself at the German Dispensary, where Dr. Gerster diagnosticated osteo-myelitis due to traumatism. The humerus was thickened to six times its normal size and was rough, the integument was œdematous, and the muscular substance had almost entirely wasted away. The patient was sent to the German Hospital, where nine weeks ago, assisted by Dr. George F. Shrady and the house-staff, he operated as follows: He made an incision, beginning about three inches above the point where the musculo-spiral nerve passes around the humerus, exposed that nerve, and then continued the incision downward nearly to the capsule of the elbow-joint. The soft parts being divided completely, he opened the cavity of the bone with a chisel. In the middle portion of the humerus he found sanguinolent cellular tissue, such as is found in the epiphysis of any of the long bones. Further down he exposed a cavity containing pus, and also a large sequestrum

which reached down into the middle of the lower epiphysis, and was surrounded by gelatinous tissue which had penetrated the joint. Dr. Gerster continued the incision and exsected the elbow-joint. He also found that the upper part of the humerus had a cavity with pus, but he did not detect any sequestrum. He scooped out, however, as much of the pus and softened tissue as possible, and felt certain that the scoop had entered the shoulder-joint, which also was involved. A long drainage-tube was placed accordingly into the upper part of the shaft, and, the limb being put upon a suitable splint, the ordinary after-treatment was adopted. During the first two weeks after the operation there was considerable fever, the evening temperature being 103 F., and the morning 101 F. The incision in the soft parts, however, closed by first intention, and only the shoulder-joint remained tender and painful. From this Dr. Gerster was led to believe that the fever was due principally to retention in the shoulder joint, and the subsequent progress of the case showed that undoubtedly disorganization existed and amputation would be necessary.

An accident occurred during the operation, which Dr. Gerster thought should be mentioned. He used for

THE ESMARCH CONSTRICTOR

a solid rubber band, one inch wide and one-sixth of an inch thick, and applied it around the arm in the upper third. The usual amount of pressure was applied, but it proved to be too much for this limb, and after the operation there was decided anæsthesia of the integument of the hand, and the patient could not move the fingers. Nine weeks after the operation the paralysis remained, and doubtless was the result of too great pressure by the constrictor. Fortunately it would do this patient no special harm, as he must lose the limb entirely, on account of the irremediable state of the elbow and shoulder-joints, and the entire shaft of the humerus.

Dr. Gerster thought that diagnosis and interference, in many cases, was deferred too long. He maintained that if there were characteristic fever, and anatomical changes of the contour of a joint, accompanied by evidence of functional disability of the same, such as muscular rigidity on attempting to make passive motion without anæsthetics, it could be accepted as absolute evidence of inflammatory disease of the joint. If a fistula leads down to the joint, it is confirmatory evidence of joint disease. If the skin and subcutaneous tissue are pulpy and œdematous in addition to functional disability and muscular rigidity, we might be certain that there was grave disease of the joint itself. Under such circumstances, he thought the sooner exsection was performed the better would be the results, because the amount of joint structure to be removed was less than in cases of long standing, and mobility was more easily established.

Dr. V. P. Gibney referred to the well-known fact that muscular spasm about joints might be due to nerve, cord, or meningeal lesions, producing what are known as arthropathies, in which the joints were as securely fixed as when true disease of the joint-structures existed. He had frequently had cases in which mechanical apparatus for the relief of joint-disease had been applied and worn, and in which relief was promptly afforded by simple treatment directed to the spinal column, and the same cases he had been able to follow for six or eight years and no joint-disease ever developed itself.

He regarded it as very important to take into account the peripheral nerve-supply in deciding in any case the question whether or not disease of the joint existed. It was not a very uncommon observation to see "joint disease" go through all its stages without the joint being affected at all.

With regard to the question of early operative interference, the natural history of joint disease in children should be considered. In many instances, occurring in children, the patients would recover with much better joints if the disease was left to run its natural course than if exsection was performed, as had been demonstrated by well-observed cases.

When the disease occurred in patients over twelve years of age, it might be advisable to exsect or remove portions of diseased bone early. But he regarded it as bad practice to exsect or resort to any operative interference in cases of joint disease occurring in young children. He believed that a better plan was to keep the limb in as good position as possible, employ passive motion at the proper time, or let it take care of itself, and allow the disease to run its natural course. He thought it well to make a distinction between the cases of joint disease occurring in children and those occurring in adults, in forming a prognosis or estimating the value of operative interference.

Dr. Gerster did not wish to be understood as saying that functional disturbances about a joint alone were sufficient to justify the diagnosis of joint disease; for, it was well known that very serious functional disorder could occur without any local anatomical changes whatever. But these disturbances, associated with the other symptoms mentioned, he believed to be sufficient to enable the surgeon to make a positive diagnosis without waiting for the time when a probe could be introduced into the joint itself. There were practitioners who postponed making a positive diagnosis until this condition of things was reached.

Whenever there was fever, accompanied by change in the contour of a joint, evidence of inflammatory processes, and functional disturbances of the joint itself, the surgeon was justified in making a complete diagnosis.

With regard to early operative interference, whether it be scooping out débris, removing sequestra, partial or total exsection, he made no distinction with reference to the time when the operation should be performed. But he shared with Dr. Gibney in the opinion that total exsection should not be done, as a rule, in the very young subject. He would perform the operation, however, under certain circumstances, for example, such as obtained in the case reported, where it was necessary as a measure for saving the life of the child, and scooping with fixation of the joint would not answer. In all cases, he was willing to make an exploratory incision as soon as possible. At the present time it was almost impossible to make a positive and detailed diagnosis without opening the joint in most cases; and in order to act intelligently, he believed that it was of the greatest necessity to expose the seat of the disease, determine the cause of the peculiar pathological changes about the joint, and then remove them if possible. Very often a slight interference sufficed to save the joint, as the exact condition which gave rise to the joint disease varied in different cases.

The President remarked that Dr. Gerster's last case was interesting, especially with reference to the

paralysis following the use of the rubber constrictor. He had seen a similar case, some six years ago, in Dr. Weir's service at the Roosevelt Hospital. In that instance there were no local peculiarities to account for the result. The patient, however, entirely recovered, and he could not regard Dr. Gerster's case as hopeless with reference to the paralysis, as the nerves might be restored, and that could not be decided until at the end of two years. Recovery in such cases was more apt to take place in the *second* than in the first year after the injury.

The society then went into executive session.

Correspondence.

LACERATION OF THE CERVIX UTERI.

A Reply by Dr. Montrose A. Pallen to Dr. J. Henry Bennet.

To the Editor of The Medical Record.

Sir: In your issue of April 29th, Dr. Bennet has seen fit to reply to my communication to you of February 25th, wherein he states that "*not one of Dr. Pallen's statements respecting my utterances in the debate is true, and I appeal to the very physicians present whom he names as corroborative witnesses of what I assert.*" *

In order that the readers of The Record may understand the question of veracity raised by Dr. Bennet, I will quote what I said, viz., "It is unfortunate that Dr. Bennet should permit such a publication to go forth after his most decided recantation of the views in his paper. He distinctly avowed (in the presence of Drs. Playfair, of London, Hodgen, of St. Louis, Marcy, of Boston, and many others whom I do not remember), in his speech closing the debate on his paper, that for the past twenty years he had paid comparatively little attention to gynecological subjects; and that he felt satisfied that during this period he had not kept pace with the advances made. . . . In the remarks I made on the afternoon of the discussion, I took issue with every objection raised by Dr. Bennet, and he openly and frankly accorded me the position of having converted him. His statement was about as follows:

"*Dr. Pallen, who read his extraordinary paper at the meeting of the British Medical Association, held at Cambridge, in* 1880, *rather startled me by the advocacy of the treatment of laceration of the cervix in contradistinction to the views of his compatriot, Dr. Marion Sims, who has equally surprised us by advocating the division of the cervix for certain troubles. But now I find I misapprehended the conditions as then detailed by Dr. Pallen, and if I was wrong in the views I enunciated in this paper, I think Dr. Pallen should be thankful that I gave him such an opportunity to air his opinions. Admitting that I have failed to keep pace with advances made by the gynecologists of the last twenty years, I do not like to have my errors so emphatically denounced as they have been by Dr. Pallen and others,*" etc.

I appeal to Drs. Hodgen, Marcy, and the other Americans, as well as Drs. Playfair, Williams, and the other English gentlemen who were present, if I do not substantially quote the remarks of Dr. Bennet as he made them.

I reiterate the statement that I correctly quoted Dr. Bennet, and I am prepared to prove the truth of my remarks.

After reading Dr. Bennet's communication, I addressed the following letter to Prof. John T. Hodgen, of St. Louis; to Prof. Henry O. Marcy, of Boston; and to Prof. Paul F. Mundé, of New York:

118 Madison Avenue, N. Y., April 28, 1882.

My Dear Doctor: On the 25th of February last, I published in The Medical Record a communication concerning the last speech of Dr. J. Henry Bennet, about his paper on laceration of the cervix, read in the Obstetrical Section of International Congress, held in London, last August. I enclose a copy of this publication, and I beg of you to tell me if I did not correctly quote the remarks of Dr. Bennet. I ask this favor of you, because Dr. Bennet, in a letter from Mentone, Italy, published in The Record of this date, charges that "not one word of Dr. Pallen's respecting my utterances in the debate is true, and I appeal to the very physicians present whom he names as corroborative witnesses of what I assert."

Now, my dear doctor, I am the last man in the world to intentionally injure any person, much less Dr. Bennet; but the truth, however unpalatable it has been to him, must be given in a question of science.

Very sincerely yours,
Montrose A. Pallen.

Unfortunately, before my letter could reach Professor Hodgen, of St. Louis, he had passed away in consequence of a sudden perforation of the gall-bladder, and his death removes him from the witness-stand; yet I have the satisfaction of knowing that, in the very last conversation I had with him in London, in August, 1881, he warmly congratulated me on what he called "Bennet's *admission* and *acknowledgment*, that he had been worsted by Americans, in the defence of a purely American operation." That this was the general opinion, is to be inferred from the following replies to my note of April 28th:

(Letter from Professor H. O. Marcy.)

116 Boylston Street, Boston, May 2, 1882.

Dr. Montrose A. Pallen.

My Dear Doctor: Thanks for your note. I distinctly remember the discussion in which I took part. Dr. Bennet yielded, as I thought, very gracefully to the accumulated, and, as he was pleased to call it, American evidence as to the value of repair of the cervix. You paid him a handsome compliment upon the great worth of his services rendered to gynecology, which he often took occasion to refer to very pleasantly while I was his guest at the "Ferns." There he went over the whole subject with Dr. Nelson, of Chicago, and myself, and said that *he felt most aggrieved that it was supposed he had not understood what a ruptured cervix really was!* He showed us a copy of his work, the first edition, upon "Inflammation of the Uterus," in which he had clearly stated that these conditions (infiltrated inflamed cervix) were not rarely produced by injury in labor, etc. *He stated that he had no opportunity to judge of the value of operative procedures, supposed he must admit it,* but thought he had not seldom, by caustic, secured a not very different result. *I certainly felt that we could accredit to him the acceptation*

* All italics and capitals in this paper are mine.—M. A. P.

of the utility of Dr. Emmet's operation, and, TO THE BEST OF MY RECOLLECTION, SHOULD THINK YOU HAD QUOTED HIM FAIRLY IN YOUR ARTICLE. . . .

Respectfully,
HENRY O. MARCY.

(Letter from Professor Paul F. Mundé.)

20 WEST FORTY-SIXTH STREET, NEW YORK, May 6, 1882.

DR. M. A. PALLEN.

MY DEAR DOCTOR: In reply to your favor of April 28th, asking me to give you my recollections of the remarks made by Dr. J. Henry Bennet, in the discussion of his paper on "Laceration of the Cervix Uteri," I beg to say that I remember hearing Dr. Bennet say, in closing the discussion, that you ought to be thankful to him for giving you "*the opportunity to air your opinions*," and "*that he admitted that he had not kept pace with the recent advances in gynecology.*"

I was unfortunately detained, and arrived too late to take part in the discussion, as I had hoped to do. I entered the hall as you were speaking, *and heard Dr. Bennet's final remarks in reply.* THEY WERE, AND MY RECOLLECTION IS QUITE DISTINCT, SUBSTANTIALLY THE SAME AS YOU HAVE QUOTED HIM. *I left the room with the impression that Dr. Bennet had, at least theoretically, become a convert to the operation.*

Yours truly,
PAUL F. MUNDÉ.

From the evidence of these unimpeachable gentlemen, physicians of the highest integrity and intelligence, it will be seen that Dr. Bennet has denied what he uttered in his last speech of the debate on his paper, and that the *British Medical Journal* (November 26, 1881) and the "Transactions of the International Medical Congress" (pp. 341, 342, vol. iv.) contain his remarks *as he never delivered them.*

From the above testimony I fancy that my brother physicians will accord me the justice of having quoted Dr. Bennet as he spoke, and as Drs. Marcy and Mundé heard him.

Dr. Bennet says: "To utter the drivelling idioms which Dr. Pallen imputes to me in the discussion that followed the reading of my paper, I must have been laboring under *senile softening of the brain.*"

Very respectfully,
MONTROSE A. PALLEN.

118 MADISON AVENUE, NEW YORK, May 9, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 7, 1882, to May 13, 1882.

KING, WM. S., Colonel and Surgeon. The extension of his leave of absence on account of sickness, granted him in S. O. 251, November 7, 1881, from A. G. O., still further extended six months on account of sickness. S. O., 104, A. G. O., May 5, 1882.

CLEARY, P. J. A., Capt. and Ass't Surgeon. The leave of absence on Surgeon's certificate of disability granted him in S. O. 224, October 4, 1881, from A. G. O., is extended six months on account of sickness. S. O. 107, A. G. O., May 9, 1882.

HALL, W. R., Capt. and Ass't. Surgeon. Assigned to duty at Fort Bliss, Texas. S. O. 95, Dept. of the Missouri, May 8, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 13, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
May 6, 1882.	19	8	181	6	145	78	19	0
May 13, 1882.	10	7	186	8	157	73	21	0

STATE COMMISSIONER OF LUNACY.—The Governor has sent in the name of Dr. Stephen Smith as Commissioner of Lunacy in place of Dr. Ordronaux. There is nothing personally objectionable to either of these gentlemen. Those who are anxious for asylum reform, however, will not be contented until a commission of more than one person is appointed to supervise our asylums.

THE CRIMINAL INSANE.—An effort is being made to induce the Massachusetts Legislature to provide a separate asylum for the criminal insane. Petitions have been received signed by all the State Asylum Superintendents. It is shown by English statistics that fifteen times as many insane convicts per thousand escape from ordinary lunatic asylums as from asylums for the special care of this class.

A COLLEGE FOR MEDICAL PRACTITIONERS has been formed in St. Louis. The faculty includes Drs. Rumbold, Hughes, and other excellent men.

DR. J. J. WOODWARD is reported to be seriously ill in Europe. The continued strain to which he was subjected during the President's illness broke down his nervous system, and soon after the President's death he went abroad. He is now at Nice, and the reports received from him do not encourage his friends.

PERSONS WHO USE FRUITS AND FOOD preserved in tin cans have been found to suffer eventually from gastric trouble. This, it is asserted, is due to stannous compounds which are extremely irritant. Mr. Edison is reported (*Science*) to have invented a method of preserving articles of food in glass vessels from which the air has been exhausted and a high vacuum produced. The glass vessel is then hermetically closed by sealing off the channel to the air-pump, the envelope produced being essentially a homogeneous piece of glass. This invention appears to meet the difficulty experienced in the use of tin cans.

THE NEW YORK STATE DENTAL SOCIETY met at Albany, May 10th and 11th. The following officers were elected for the ensuing year: *President*, L. S. Straw, Newburg; *Vice-President*, F. French, Rochester; *Secretary*, J. E. Line, Rochester; *Treasurer*, A. H. Brockway, Brooklyn; *Correspondent*, W. H. Atkinson, New York.

DEATH OF DR. JOHN BROWN OF EDINBURGH.—Both literature and medicine will mourn the loss of Dr. Brown of Edinburgh, best known perhaps as auther

of the little story entitled "Rab and His Friends." Dr. Brown was the son of a clergyman, and was born at Biggar, Lanarkshire, in September, 1810. He received his education at the University of Edinburgh. He was the author of two volumes of essays on medical subjects, and was a contributor to the *North British Review*, *Good Words*, and the *Scotsman*. He died on the 11th inst.

Guiteau's Body.—Arrangements are now being perfected by one of our local societies for obtaining the body of Charles J. Guiteau, after his execution, for the purpose of a post-mortem examination.

The Proposed Cornell Medical School.—Negotiations are still going on with the Cornell authorities in regard to establishing a medical department, to be located here. The prospects are reported to be favorable.

The Missouri State Medical Association met at Hannibal on the 16th of May.

The Thirty-sixth Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane will be held at the Grand Hotel, in the city of Cincinnati, O., on Tuesday, May 30, 1882, commencing at 10 A.M.

A Discussion on Chloroform has been going on for several weeks at the Academy of Medicine, Paris. Nothing new seems to be brought out, but it may be seen that the French surgeons are much more in favor of this anæsthetic than we are in America. M. Gosselin even laid it down as a positive fact that chloroform, when properly administered according to his method, cannot be dangerous. This view was very generally opposed.

The Illinois State Medical Society will not hold its annual meeting on the third Tuesday in May.

Dr. Bosse, of Domnau, thinks he has discovered that the oil of turpentine possesses most extraordinary curative properties in the treatment of diphtheria. He has employed this, which he orders to be administered in tablespoonful doses, for some time with great success.

Berlin Medical Society.—At a recent session of the Berlin Medical Society, which was held on the 30th of last month, the names of Drs. Austin Flint, Seguin, and Putnam, were submitted for corresponding membership. These gentlemen were elected. On the same occasion, among other distinguished foreign physicians, Drs. W. Gull, Pavy, and Grainger, of England, were also made corresponding members.

Fatty Heart in Diphtheria.—Prof. Leyden, President of the Berlin Medical Society, thinks that there is a fatty degeneration of the muscular fibres of the heart, with abundant cell-proliferation, in diphtheria.

The Louisiana State Medical Society will not hold its regular annual meeting this year.

M. Paul Bert has been elected member of the Academy of Sciences in place of the late M. Bouillaud.

The Society of the White Cross.—A society has been formed in Austria under the above name. It will supplement the work of the Red Cross Society by providing homes for convalescent and invalid soldiers.

M. Cornil has been elected to the Chair of Pathological Anatomy, in Paris, in place of M. Charcot.

Germany seems to be passing through a series of epidemics. Small-pox is reported to prevail to an alarming extent in the Rhine provinces.

The Alabama Medical Association was held at Mobile, Ala., April 12th, 13th, and 14th. Dr. J. B. Gaston, the President, delivered an address upon State sanitary matters. A number of interesting papers were read. The following officers were elected for the ensuing year: *President*, Clifford D. Parke, of Selma; *Vice-Presidents*, John M. Godfrey, of Sumterville, and Daniel O. Hopping, of Letohatchee; *Secretary*, Thomas A. Means, Montgomery: *Treasurer*, Walter C. Jackson.

The American Surgical Association will hold its third annual meeting in Philadelphia, May 31st, June 1st and 2d. Papers are expected from Drs. Cabell, of Virginia, Briggs, of Nashville, Weist, of Indiana, Gunn, of Chicago, and others.

Dr. John P. Gray, of Utica, is recovering from the injuries inflicted in the recent attempt by a lunatic to kill him.

A Large Brain.—Dr. Chr. Tompkins, of Richmond, reports the case of a negro who recently died of phthisis, and whose brain weighed seventy ounces. The man was thirty-two years old. He was of large build, and six feet two inches high. He had been twice a murderer, and twice in a lunatic asylum. When sane he was considered stupid.

Illinois State Board of Health.—The Illinois State Board of Health held its regular quarterly examinations on April 13th. This examination, says the *Chicago Medical Review*, exceeded in severity that of many of the most rigid medical colleges.

Dr. Giovanni Lanza, the Italian Prime Minister, died March 9, 1882. He had been a physician for nearly fifty years.

A New Way of Smoking Opium.—Dr. M. J. Madigan (*Chicago Medical Review*) describes a new way of smoking opium among some of the Americans and Chinese. They soak chewing-tobacco in laudanum, dry it, and then smoke it in a pipe.

The Mississippi State Medical Association held its annual meeting at Oxford, Miss., April 5th, 6th, and 7th, the President, Dr. B. F. Ward, in the chair. About eighty members were present. Papers were read upon Scarlet Fever, Tetanus, Veratrum in Puerperal Convulsions, Infantile Convulsions.

A resolution was passed condemning the action of the New York State Medical Society in its recent adoption of a new Code. Reports of some obstetrical and surgical cases were read, also a report of a case of lumbricoides perforating the bowel.

The following officers were elected for the ensuing year: *President*, Dr. Wirt Johnson, of Jackson; *First Vice-President*, Dr. J. M. Greene; *Second Vice-President*, Dr. J. E. Halbert; *Third Vice-President*, Dr. J. T. Chandler, Oxford; *Fourth Vice-President*, Dr. E. L. McGehee, Woodville; *Recording Secretary*, Dr. T. W. Fullilove, of Vaiden; *Corresponding Secretary*, Dr. M. S. Craft, of Jackson; *Treasurer*, Dr. Robert Kells; *Orator*, Dr. G. W. Trimble, Grenada; *Alternate Orator*, Dr. J. B. Sandford, Corinth.

The society adjourned to meet next year at Meridian.

The Michigan State Medical Society held its seventeenth annual meeting at Ypsilanti, May 10th and 11th.

At the Second Annual Commencement of the Memphis Hospital Medical College there were thirty graduates in medicine and four in pharmacy.

A School of Dental Surgery is to be organized in connection with the Medical Faculty of the University of Maryland.

Dr. Hugh W. Brock, Professor of Anatomy, Physiology, and Hygiene in the State University of West Virginia, died April 28th at his home in Morganstown.

Bacteria and Respiration.—From a number of careful experiments, Professor Gunning concludes that inspired air is freed from bacteria which may have been contained therein; and that the expired air does not carry bacteria along with it out of the body.

A Night Medical Service, according to report, is to be established in Washington.

The late Dante Rossetti was a victim to the chloral habit. "About 1868," says his biographer, "the curse of the artistic and poetic temperament —insomnia—attacked him." He then began the use of chloral, and suffered from it more or less for the rest of his life.

A Plot to Murder and Rob Medical Men was recently discovered in Berlin, and was of a most extraordinary and diabolical character. Medical men were selected because they could be most easily made victims. It was arranged that one of the party of conspirators should play sick and send for a physician. When the doctor came and began to examine the malingerer as he lay in bed, a specially devised garroting instrument was to be thrown around his neck. An accomplice was to pinion the arms. Having strangled their victim he was to be thrown into the water. The police were informed of the plan by one of the accomplices. A policeman was sent in place of the doctor, and found that the plot was as had been described. The men were arrested.

The story is well attested, but has a somewhat fishy odor.

Professor Henle, of Göttingen, recently held the semi-centennial jubilee of his doctorate. Among Professor Henle's pupils who sent their congratulations were Kölliker, Ehlers, and Waldeyer. He was presented with a gold medal. A bust of the venerable professor, presented by the Medical Faculty, was unveiled.

A Resection of the Stomach was again successfully performed, April 1st, by Dr. Nebinger, of Bamberg. The patient, four days later, took nourishment, and was doing well.

Professor Wagner, of Leipsic, has been fined $12 for calling homœopathy a swindle, etc. He was sued by seventy-five homœopaths, among whom the spoils are presumably to be divided.

Diagnosis of Tumors of the Bladder.—Sir Henry Thompson has shown that by a direct median incision into the bladder, that organ can be explored for tumors. The incision is without danger, and examining through it the nature of the tumor can be discovered.

Yellow Fever Theorists are viewing this as a test year in the South. Below the thirty-fourth parallel there has been practically no winter, and the spring has been early, warm, and humid. Besides, a vast territory has been inundated, which, when the waters retire, will expose an unusual amount of dead vegetable matter to the ferment of summer. Three of the conditions supposed to favor the development of the disease are thus found to be present. Rigid quarantine has already been established against the Antilles, and infection from that known quarter is forestalled. The past three years have been unmarked by yellow fever in the United States, and therefore the germs of previous epidemics must be viewed as now dead. If, then, yellow fever is strictly an exotic, it only depends upon a vigilant quarantine maintained throughout the season to insure that the summer will pass without a case of local origin.

Hospital for the Ruptured and Crippled, New York.—Dr. Allan McLane Hamilton has been appointed Consulting Neurologist, and Dr. Geo. F. Shrady Consulting Surgeon to this institution.

Daniel W. Perham, M.D., of this city, died April 27, 1882. He was born in Mount Pleasant, Wayne County, Pa., August 23, 1852; was the son of Sylvius G. and Lucinda H. Perham, immediate descendants of the first settlers of that part of the State. He obtained his academic education at the Pleasant Mount Academy, a private institution of his native place. During the spring of 1874, he commenced the study of medicine in the office of his uncle, Dr. Warren Schoonover, of New York City, and entered Bellevue Medical College in the autumn of the same year, and graduated in the spring of 1877, ranking high in his class. On receiving his degree he returned to his native place and commenced the practice of medicine for a few months, but by the advice of his uncle, Dr. Schoonover, he returned to New York City. June, 1877, he was appointed District Physician in the Northeastern Dispensary, New York City. August, 1878, he became associated with Dr. Alexander Hadden, of New York City, as assistant in general practice, which positions he held at the time of his death. On November 29, 1881, he married Miss Cassie Hadden, of Orange County, whom he leaves, with his family and numerous friends, to mourn his loss. On April 19th, in apparent robust health, he was taken suddenly and seriously ill, which illness developed into cerebro-spinal meningitis; he grew gradually worse in spite of all medical aid, and died April 27th, about nine days from the onset of the disease. He was a member of the Physicians' Mutual Aid Association and New York County Medical Society, and also a member of the Central Congregational Church, New York.

Ethics in Consultations.—Our attention has been called to an error concerning some remarks made upon this point, in a recent issue (p. 502). The question was, whether a medical man who was called in an emergency should not give up the case to the family attendant on the arrival of the latter. In the case referred to, by an accidental transposition of letters, we were made to say the opposite of what we intended. The physician who had moved to the neighborhood of the patient, and who had been in attendance upon him for three years, was the family physician, and not the one who had attended the patient previously. The latter was called in an emergency in the absence of the former, and should not hold the case unless specially asked to do so by the patient.

Commencement of the College of Physicians and Surgeons.—The seventy-fifth annual commencement of the College of Physicians and Surgeons, the med-

ical department of Columbia College, was held at Steinway Hall on Tuesday afternoon. The exercises were begun with prayer by the Rev. Sullivan H. Weston. Acting President Drisler, of Columbia College, conferred the degrees, and Prof. Alonzo Clark, the President of the College, delivered the opening address. The announcements of the awards of prizes were made by Prof. William H. Draper, President of the Alumni Association, and by Prof. John G. Curtis, the Secretary of the Faculty. The first prize of $500, for proficiency at examination, was awarded to C. W. Hunter; the second prize of $300 was awarded to James B. Taylor; and the third prize of $200 was awarded to J. H. Woodward. Mr. Luther R. Marsh delivered the address to the graduates. The degree of Doctor of Medicine was conferred upon one hundred and fourteen graduates.

The New Bellevue Hospital Medical Board.—At a meeting of the Commissioners of Public Charities and Correction, May 12th, some changes were made in the Medical Board. These changes were chiefly personal, no new or radical alterations being introduced. The service is divided as before into four medical and four surgical divisions. These are assigned to the three large colleges of the city, with two divisions for the non-collegiates. The position of gynecologist is made more distinctive, and one of these specialists is assigned to each medical division. The Medical Board is thus increased from twenty-four to twenty-eight.

The rule is now established that the house-staff shall be appointed, after competitive examination, in proportionate number from each college, and from the non-collegiate class. The staff will be assigned to the divisions visited by the physicians or surgeons of their respective colleges.

The newly appointed members of the Medical Board or visiting staff are Drs. A. A. Smith, F. L. Dennis, F. R. S. Drake, J. W. Wright, G. L. Peabody, J. J. Williams, W. G. Wylie, W. C. Hunter, F. Lange, and W. R. Gilette.

Of the old Board, Drs. Jas. R. Wood and Erskine Mason have recently died; Drs. L. A. Sayre and A. B. Mott retire, but become members of the Consulting Board.

The Amount of Arsenic in Jennie Cramer's Body.—Prof. Chittenden gives the following as the result of his examination of the body of Jennie Cramer, for arsenic: The 57 pounds of body last examined contained 1.9498 grains. The internal organs previously examined contained 1.1694. The total amount of arsenic in Jennie E. Cramer's body was, therefore, 3.1192 grains. Prof. Chittenden gave the relative distribution of arsenic in the muscle and body tissue as follows:

	White Arsenic. Grain.
1 pound sampled thigh-bone contained.....	.000
1 pound sampled leg contained.....	.011
1 pound sampled transverse section contained.	.021
1 pound sampled arm contained.....	.034
1 pound sampled muscle from breast contained	.087
1 pound sampled muscle from back contained.	.260

He stated that the distribution of arsenic in the muscle and bony tissue was somewhat peculiar, as was the distribution in the throat and tongue and also in the kidneys. From these points a toxicologist is sometimes enabled to draw conclusions as to the length of time arsenic has been in the body before death. A marked feature was the absence of arsenic in the thigh-bone, and the large quantity in the tissue of the back. The striking feature of the matter was the uneven distribution of the poison through the tissue of the same kind. The trachea, larynx, and tongue contained nearly four times as much as both kidneys. Again, the amount in the trachea, larynx, and tongue was nearly equal to the amount in the entire left arm, which weighed nearly two pounds and a half. The amount in the stomach and intestines was more than half the amount in the entire internal organs. From all this he was led to the opinion that the arsenic found could not have been in the body a long time before death—not longer than 24 hours.

Prof. Chittenden said: "There are certain data as to the probable form in which arsenic may have been taken by decedent. My opinion is that it was given in a soluble and diffusible form. My opinion is based first on the amount of arsenic in the brain. In one-third of the brain I found .0255 of a grain of white oxide of arsenic. Taking even that quantity and neglecting the remaining two-thirds, the amount is exceptionally large in my experience. The rule, as based on my own experience and on the published results of other investigations, is that arsenic taken as white oxide or in other insoluble forms is never found in the brain, either in acute or chronic cases of arsenic poisoning, in other than very small traces, whereas when arsenic is taken in the form of a soluble and diffusible compound, which can readily pass into the blood, the quantity found in the brain is generally very much larger, the reason being that when the arsenic is in a form soluble with difficulty, enough cannot pass into the blood at any one time to allow of any great accumulation in the brain, since it is very readily eliminated—thrown out of the body by the kidneys. This opinion is partly based on results obtained by French and German chemists, corroborated by repeated experiments of my own. The second point which influences me in my opinion as to the form in which the arsenic was taken is the large quantity found in the muscular tissue of the back. The third point is that when solid arsenic is taken microscopic examination usually reveals crystals of the poison on the membrane of the stomach and intestines.

The Late Professor James R. Wood, M.D., LL.D.—At a special meeting of the Medical Board of Bellevue Hospital, called on the occasion of the death of the late Professor James R. Wood, and held on the 6th of May, 1882, it was resolved:

First.—That by the death of our late associate the Board has lost a member whose services for a period of thirty-five years as an attending surgeon to this Hospital, and whose labors as a clinical teacher have contributed largely to the usefulness of the Institution in the relief of suffering and in the diffusion of the practical knowledge of surgery.

Second.—The memory of our late associate will ever be gratefully cherished as the founder of the Pathological Museum connected with this hospital, which he enriched by the gift of his large and valuable private collection, and which deservedly bears his name.

Third.—The members of this Board feel that by the death of the late Professor Wood they have individually lost a generous, warm-hearted, and steadfast friend, as well as a valued associate; and that his death leaves a void which must remain unfilled, not only in the hospital, and in the relations of friendship, but in the medical profession and in social life.

Fourth.—The Medical Board tenders the heartfelt sympathy of all its members to the family and relatives of the late Professor Wood in the loss which they have sustained, together with the hope that they may derive consolation from his merited professional eminence, his long life of usefulness, his unblemished character, and his private virtues.

A. Clark, *President*,
Charles McBurney, *Secretary*.

A New Profession.—In Europe young men are studying electrical engineering. This profession has not yet become overcrowded.

Gangrene from injury to the Ulnar Nerve.—Dr. P. S. Root, of Monroe, Michigan, sends us the following history of a unique case in which gangrene seemed to result from traumatism of the ulnar nerve:

"W. P——, forty-seven years of age, robust, and weighing two hundred pounds, was injured by a circular saw on the morning of November 29, 1881. The wound was situated on the anterior part of the forearm, extending from the middle of the lower fourth obliquely upward and backward to the ulnar side for a distance of eight inches. The ulnar nerve and artery were divided, and the ulnar itself slightly injured. When brought to my office I found the artery bleeding freely from its *distal* extremity, but there was no hemorrhage from its proximal end. I immediately applied compression to the brachial and tied the bleeding end; then, removing compression, endeavored to find the other extremity, but without success. The wound was then cleaned and dressed, carbolized silk sutures being used. The parts were brought into good apposition, and carbolized oil used. Three days later the wound looked healthy, with but little swelling; dressings were daily reapplied; sutures removed on the sixth day. Union by first intention was only partial, but was completed by granulation, December 24th. The parts supplied by the ulnar nerve below the seat of injury remained paralyzed, but the circulation and temperature of entire hand was, and had been, good from the first. No hemorrhage occurred from the untied artery, nor was there any sloughing of tissues in or about the wound. There was no swelling of the hand or fingers, and some power of flexion had been regained over the second, ring, and little fingers (the ones whose tendons were divided), owing to union above. The case was discharged as cured, the patient being directed to use the hand moderately, by working the fingers, rubbing, etc. On January 6, 1882, the patient returned, stating that his hand pained him. Upon examination, the ulnar side of hand and little finger (inner side) were found gangrenous; the back of the hand was swollen and œdematous, the fingers all having that tallowy appearance so common in impending gangrene. The constitutional symptoms were quite marked, pulse, 104; temperature, 100¾° F.; with loss of appetite, etc. Patient stated that he had been getting on nicely until two days before, when he noticed a large blister over the gangrenous area.

"A charcoal and flax-seed poultice, with permanganate of potash, was ordered, and pills of hydrarg. iodid. and quinine given every six hours. Next day there was improvement, and the progress of the gangrene was stopped. A slough half an inch deep finally came away, and granulation slowly followed. By February 7th the wound had healed.

"We have here," writes Dr. Root in conclusion, "a case of gangrene without other assignable cause than traumatic paralysis—gangrene without the least implication of the original wound, and in a member in which circulation and temperature were apparently normal. This point seems proven, in that at time of original injury, the anastomotic communication, well known to exist between the ulnar and radial arteries, was amply demonstrated. Again the disease was very late in appearing, and did not extend to the extremity of the little finger. Every care was taken to prevent any compression of hand by bandaging, and no exposure to cold was allowed. No disease of the arteries was evident, and the patient, in every way, was seemingly healthy.

"Finally, the treatment, though old, deserves attention. In this case there was not the slightest hope that the arm could have been saved, but for the use of the poultice. The internal treatment after first prescription was: Quin. sulph., ʒ ss.; rhei. pulv., ℈j.; ext. nucis vom., gr. ii.; M., Ft. in Caps. No. 10; S., one ter. in die. This was continued until the slough separated. Had this case been one of hospital practice, I do not hesitate to say amputation would have been recommended and performed; therefore, so much for conservative surgery."

On Selecting Spectacles.—Dr. Reynolds makes some sensible remarks on this point in the *Medical Herald*. He says: "Few persons, not directly concerned, know how difficult it is to get spectacle lenses properly ground. It is the common belief that all jewellers are opticians, and spectacle-peddlers are experts in optics. An instrument devised by Professor Snellen, of Utrecht, enables one to determine with almost perfect exactness, the powers and quality of refracting lenses. This instrument, the phakometer, shows that nearly all the glasses sold in frames ready-made, are but poor imitations of the real thing for which they are sold.

"Crown glass, and not pebble, is the only proper material for spectacle lenses. The only lenses fit for use are those made to order by some fixed system of grading the refracting power.

"It is often observed that the common lenses hawked about the country as *diamond, crystal*, etc., are the poorest quality of glass, so imperfectly ground as to represent sectors having different degrees of refraction in the different parts of the lens. It is quite rare to find in these an equal refracting power in the two glasses in the same frame. Persons who need glasses to correct presbyopia, are not likely to require anything like accuracy, unless they are given to literary habits. Persons who read much soon find that the ordinary glasses of commerce, and those peddled by the '*professors of optics*,' are not adequate, and seek the aid of a practitioner of ophthalmic medicine who is able to distinguish between muscular asthenopia and neuralgia."

Physicians who do not Read.—Whether they are too busy, or too illiterate, or that they are not yet beyond the influence of their earlier habits and associations, it seems to be a fact, if implicit reliance can be placed on a recent statement in the columns of our contemporary, the *St. Louis Medical and Surgical Journal*, that scarcely one-half of the twenty-six thousand physicians practising in the Western and Southwestern States take a medical journal of any kind. Of these, one-half, it states, take the cheapest medical journal they can obtain, so cheap, indeed, that it will be sent to them whether it is paid for or not.—*College and Clinical Record.*

Original Communications.

THE SURGICAL TREATMENT OF CHRONIC NASAL CATARRH.*

By WILLIAM C. JARVIS, M.D.,

NEW YORK.

Until recently few diseases have given rise to more dissatisfaction in their treatment than chronic nasal catarrh. Nor does this seem strange when we learn that the practice of posterior rhinoscopy, the most important of all nasal examinations in diagnosing the extent and chronicity of this disease, and performing the necessary operations for its radical cure, is seldom practised even by the specialist abroad, and is largely confined to the laryngologist in this country.†

I would also attribute much of the failure which has followed the treatment of chronic nasal catarrh to the slight importance that is attached to an intelligent differentiation of the various conditions found in this disease, the recognition of which is of pre-eminent importance in the determination of the best means for relief or cure. Dr. Frederic I. Knight, instructor of laryngoscopy in Harvard University, in an article devoted to the consideration of one of the operations‡ I propose to present to you this evening, mentions nasal catarrh as one of the opprobia medicinæ. "The physician," he writes, "felt annoyed on being asked to prescribe for it, and perhaps almost vexed with his patient for having such a thing. The patient, deriving no relief from sniffing up salt water or chlorate of potash, soon took to empirical remedies, and the worst sufferers have usually tried faithfully all the vaunted specifics in turn." He adds that "the removal of these (turbinated) hypertrophies constitutes one of the greatest advances yet made in the treatment of the affections of this region (nares)."

I recognize and will speak of five tissue formations which occur with unequal frequency in chronic nasal catarrh, but whenever found are invariably associated with the disease. They are hypertrophy of the tissues over the turbinated bones, thickening of the tissues over the nasal septum, deviation of the cartilaginous septum, gelatinous polypi and adenoma of the vault of the pharynx.

Chronic nasal catarrh is always accompanied by hypertrophic changes of the intra-nasal tissues; hence the disease is frequently termed Hypertrophic Nasal Catarrh. The principal tissues involved in these inflammatory changes are those overlying the turbinated bones. There is never any difficulty in diagnosing pure turbinated hypertrophies. They may of course involve any or all of the three turbinated bones. They generally show themselves as smooth white or light pink masses of tissue encroaching more or less upon the normal calibre of the nostril, and can always be recognized by their gross appearance. Should, however, engorgement of the turbinated tissues have occurred previous to the examination, the determination of the amount of simple hypertrophy may sometimes prove difficult, for it will be largely masked by the congestion.

When there is any uncertainty in these cases, it is often advisable to wait rather than take the risk of removing undiseased tissue.

Congestive hypertrophies, however, are, as a rule, readily recognized.

I do not consider every permanent enlargement of the turbinated tissues an hypertrophy. The physiological alterations in shape and size of normal turbinated tissue is transient in its nature, and dependent, more or less, upon the degree of irritation to which it is subjected. Hence there must be a continuous progression and retrogression in these tissues as a part of their physiological function. It is only necessary to watch the movements of turbinated tissues, irritated by means of a probe, to be convinced of this. Careful observation has induced me to believe that, in many cases of so-called hypertrophy of the turbinated tissues, the increase in size is due more to a loss of retractile power—a sort of paresis—than to distinct pathological changes in the substance of these erectile structures. This will serve to explain the existence of large, soft, sessile anterior and posterior hypertrophies, which, under the microscope, show a remarkable distention of the turbinated corpora cavernosa. These cavernous sinuses, after section with the wire, pour out the contained blood, and collapse without further hemorrhage; in this respect widely differing from the true turbinated hypertrophy, so liable to bleed, as does also the normal turbinated tissue.

Hypertrophy of the turbinated tissue, though slight in the recent stage of the catarrhal affection, steadily increases with a rapidity depending upon the degree of irritation and congestion to which the nasal mucous membrane is subjected, until, as sometimes happens, the nasal tissues will be found to have enlarged to such an extent as to completely block up the posterior nares. Owing to their inferior position, *the tissues over the lower turbinate become more hypertrophied than those over the other bones.*

Indeed, so great is this tendency of the inferior turbinate to become hypertrophied, that I have been induced to adopt the rule of looking for an increase in its dimensions as an indication of the extent and chronicity of the disease. This peculiarity, I think, may be largely attributed to the action of acrid nasal secretions collected about and retained in contact with their surfaces; on account of the obstruction in the nares, the removal of this secretion is rendered extremely difficult or even impossible, as the means usually made use of for that purpose, that of forced inspiration and expiration, cannot here be brought into play. Hence a slight amount of hypertrophy of the tissues over this bone is often met with when there is no perceptible increase in the size of the others.

Hypertrophy of the tissues over the posterior portions of the turbinated bones is more frequently met with than any of the other forms of hypertrophy.

Posterior turbinated hypertrophy is of such common occurrence that I have been forced to recognize it as a distinct peculiarity of the disease, especially when it is connected with enlargement of the inferior turbinate. It is more frequently found standing alone in the summer than in the winter months. Occasionally, however, the tissues over the anterior parts of the turbinated bones will be found to be hypertrophied to a considerable extent, while the deeper portions are but slightly affected. I have therefore divided hypertrophy of the tissues over the turbinated bones into two varieties—anterior and posterior hypertrophy.

* Read before the Medical Society of the County of New York, May 22, 1882.
† Wm. N. Daly, M.D., Archives of Laryngology, April 1, 1882.
‡ Philadelphia Medical News, January 21, 1882.

As the surgical treatment of each variety is different, the division will be found a convenient one.

Next in the order of my divisions comes thickening of the tissues over the septum.

I know my making special mention of this peculiarity as an important feature of the disease may cause some surprise, but my convictions do not come from sudden inspiration, they are the result of careful study, comparison, and experiment. By the phrase hypertrophy of the tissue over the septum, I at once do away with a large proportion of the so-called cases of deflection of the septum. In adult patients these thickened tissues can sometimes be traced as resulting from an insignificant nodule of projecting cartilage in early life, perhaps the result of an injury. This cartilaginous spur, however, would be of much consequence in the nose of a child, since the small size of its nostril would tend to bring about contact with the turbinated structures opposite, producing an irritative hypertrophy, its size depending upon the extent and chronicity of the local sub-inflammatory process.

We may also have localized thickenings of the mucous membrane, over the cartilaginous septum and vomer, resulting from the direct pressure of hypertrophies or frequently tumefied turbinated tissue.

A certain amount of turbinated hypertrophy is always discoverable in these cases, and the thickened tissues lying opposite are usually localized and correspond in their extent with the amount of turbinated hypertrophy.

This drawing is enlarged from the careful sketch of a patient. You observe the left post-nasal orifice is occupied by a posterior hypertrophy, above the upper edge of which is faintly outlined an incipient thickening of the tissue over the vomer. The inferior turbinated tissue in the right naris has partially retracted, leaving on the vomer opposite its impress, a cup-shaped mass of thickened tissue. (This same condition can, of course, occur in anterior hypertrophy.)

Deviation of the nasal septum may, of course, be osseous or cartilaginous. Deviation of the bones which form part of the septum, is seldom sufficient to give rise to any immediate discomfort. It may, however, be the cause of hypertrophy of the superimposed tissues, which in turn may lead to a chronic nasal catarrh. Hence I can, without inconvenience, exclude from my system of operations, the removal of deviations of the plate of the ethmoid, vomer, and osseous spurs of the superior maxilla, since excision of the overlying tissue renders their removal unnecessary.

Deflection of the triangular cartilage and columna of the septum are, on account of their activity as agents in the production of catarrh, of extreme importance.

As the undisturbed foreign body in the nose of a child is invariably the cause of a chronic nasal catarrh, so the neglected cartilaginous splinter—a deviated septum—must lead with absolute certainty to the same result. The nares may be in all other respects symmetrical, and the person in perfect health; but I believe it impossible for the delicate nasal tissue to withstand so powerful and permanent an irritant. The trouble frequently dates from a blow received upon the nostril. These cases, as a rule, give the most favorable results when intelligently treated by my method of operating, as they so often occur in persons otherwise healthy. The mere removal of the cause of the disease must lead to a spontaneous cure.

I have found it convenient to divide deviation of the cartilaginous septum into two varieties, localized and general.

Localized deflection of the septum usually occurs in the form of the peculiar deformity produced by displacement of the columna nasi. It does not always set up catarrh by irritating the nasal mucous membrane, for it may be entirely outside of the nasal cavity. Even in these cases its excision is often called for to remove the distressing deformity.

General deviation of the septum may occur in the form of a sigmoid deflection; in which case both the upper and lower margins of the septum show a marked convexity, or a large mass of the triangular cartilage may be projected toward or against the nasal wall.

There always exists a corresponding concavity in marked general deviations. On the contrary, in the tissue formations occurring over the septum, no such depression can be found.

The wavy outline given to the septum by alternate masses of thickened tissue, in the cork-screw nostril, may simulate these depressions, but a careful examination will result in their easy differentiation.

In including gelatinous polypi under the head of nasal catarrh, I am aware of the fact that they are generally considered and treated as an independent variety of growths. I would be justified in speaking of them in this connection, were I to give as my only reason the production of nasal catarrh by their action as foreign bodies within the nostril. I am convinced that gelatinous nasal polypi often occur as a secondary manifestation in nasal catarrh. A few months ago I devoted much time and labor in removing a large mass of thickened tissue overlying the septum. The patient was suffering with chronic nasal catarrh. The left nostril was principally involved, and an operation was undertaken to relieve an intense hemicrania which invariably afflicted the patient in damp weather. I eventually opened a way to the superior meatus, and found a cluster of glistening bead-like gelatinous polypi occupying the roof of the nostril, which were removed and cauterized with chromic acid. I discovered that these were the cause of severe headache, for the patient was at once relieved. While recognizing the hygrometric nature of the growths as explaining the peculiar symptoms, I believe the thickened septum-tissues and the attendant nasal catarrh induced the formation of the polypi.

I have been impressed by the peculiar resemblance the surface of these growths sometimes bears to the mucous membrane over hypertrophies and in other parts of the nasal cavity. Although the majority of nasal polypi show little more than the familiar gelatinous translucency, I have met with a few of large size having a membranous envelope, containing numerous meshes of distinctly outlined blood-vessels. The blood-vessels diverged from the pedicles of the polypi, and were apparently a part of the nasal mucous membrane extended over their surface, in this respect presenting an analogy to the general structural changes which occur in hypertrophic nasal catarrh.

Adenoma of the vault of the pharynx resembles closely the ordinary glandular hypertrophical faucial tonsil. It is closely associated with the hypertrophic changes occurring in the posterior nares, and should therefore be included among nasal hypertrophies. In the practice of posterior rhinoscopy, it is only necessary to follow the upward sweep of the post-nasal arches to bring these glandular masses

in view. Although holding an important place in modern medical literature, they are, so far as my observation goes, of infrequent occurrence when compared with other structural changes in hypertrophic nasal catarrh. Hence, though recognizing them as a feature of the disease, I would assign them a place of secondary importance.

Instruments for the operations.—The écraseur consists of a long and short canula, the latter of which glides over a screw thread cut on the former. A milled nut, fitting this thread, is intended to push the outer canula before it. Well-tempered steel wire (No. 5 piano gauge) is drawn through the large canula, and its ends are attached to the retention pins on the small one. As the outer canula cannot turn, there is no twisting of the wire loop formed.

The combined mirror and tongue depressor.—A stout wire, after being made to divide and assume the form of a tongue depressor, is crossed upon itself and then shaped into a pincette. Mirrors of different sizes are received between the pincette's blades. These mirrors can be placed at any desirable angle with the shaft. The hinge-joint will permit the mirror to be fixed at the most favorable angle for viewing the posterior nares, and at the same time facilitate even depression of the tongue.

This instrument will be sometimes found a convenient one, as it enables the operator to bring the posterior nares in view with one hand, leaving the other free for the manipulation of the écraseur.

The tape-holders are intended to take the place of the unsatisfactory and disagreeable procedure of tying the ends of the tape which pass around the soft palate in cases requiring this procedure.

They are two small V-shaped spring clips so arranged that the tape passing through apertures in its blades is caught by a tooth-like projection and firmly held. Pressure on the spring releases the catch and sets the tape free. The transfixion needles need no special description. They are pointed like the ordinary glover's needle.

Four different sizes are made, running from one to four inches in length. Each number has a straight needle, and three others of varying curves. They are all furnished with a light convenient handle.

The septum scissors are light instruments with the blades curved almost at a right angle, in order to enable the operator to obtain an easy view of the cartilage to be removed.

One instrument is made somewhat after the pattern of Richardson's mouse-toothed scissors, the other has a sharp beak upon the upper blade, which sinks into the tissue of the septum, and thus enables the scissors' blades to retain their grasp, while cutting through the cartilage.

A ring in the fixation blade is intended to slip over the middle finger while the knob on the movable blade is managed with the thumb.

This simple arrangement enables one to hook and divide the cartilage of the septum with great facility.

I shall now speak of the method of dealing with the first condition mentioned in my paper, and will ask your attention to the operation devised by me for the removal of posterior hypertrophies.

The operation depends upon the shape of the hypertrophied turbinated bones.

The posterior surfaces of these bones, especially the inferior, show a peculiar constriction formed by the hypertrophied tissue extending backward into the upper pharynx. The extreme point of the growth is thus thrown beyond its base.

This constriction forms a nidus for the retention of the écraseur wire.

THE OPERATION.

In using the écraseur, pass the two ends of the wire through the main canula, entering them at its distal extremity, and twist them around the retention pins. A loop is formed, whose size, of course, depends upon that of the growth. Giving the wire loop a twist toward the side of the nose occupied by the growth, it is fixed by a turn of the nut and passed into the nostril.

Holding the rhinoscopic mirror in one hand, the position of the wire loop in the posterior nares is carefully watched, while it is steadily advanced with the other hand until seen to encircle the growth. On drawing the wire home the tissue is cleanly divided, and if not too large to pass through the nares, it will generally be drawn out clinging to the snare. Make traction very slowly, stopping at short intervals, in order to prevent hemorrhage. If the nostril is obstructed by a deviated septum, or narrowed by any other cause, it may be necessary to introduce the wire sheathed in the main canula, when, by projecting the loop within the naso-pharyngeal space, the growth can be readily snared.

The hemorrhage is trifling, provided slow traction is made.

So much for the removal of posterior hypertrophies. Soft sessile hypertrophies occurring in any part of the nostril can be easily removed, as the wire readily sinks into the tissue and takes firm hold on the growth. Firm non-pedunculated posterior hypertrophies require both écraseur and transfixion needle. In using the transfixion needle, the amount of tissue requiring removal is carefully determined, and the point of the needle directed accordingly. The loop will be caught by the point of the needle projecting into the nostril, and a few turns of the milled nut causes the wire to sever the transfixed tissue. In transfixing posterior hypertrophies, the position of the needle's point can be determined by the rhinoscopic mirror. Curved needles should be used in transfixing anterior hypertrophies, in order to bring the needle's point into view. A little practice will enable one to determine when complete transfixion has taken place, by the touch in cases where the needle's point cannot be seen. Nasal hypertrophies of every size and description can be permanently got rid of by this simple method. The discomfort caused in removing these growths will vary with the susceptibility of the patient to pain and the amount of care used in manipulating the écraseur. Patients, as a rule, declare they do not suffer.

A pledget of cotton thrust into the nostril will generally suffice to control any slight hemorrhage that may occur. It is not necessary to exercise much care to prevent bleeding from anterior hypertrophies, as the hemorrhage is but transient. On the contrary, much time and caution is required in removing posterior hypertrophies, as a protracted and profuse flow of blood may follow the excision of these tissues.

RESULTS OF THE OPERATIONS.

The immediate result of the operations is a restoration of free nasal respiration. As the nature of turbinated hypertrophies renders their return almost impossible, the establishment of free nasal breathing is permanent. Since the most intense inflammatory processes are centred in the tumefied tissues, their

removal does away with the active source of the disease. The remarkable cessation of the catarrhal secretion which often follows the removal of these growths, points to the cause and seat of the disease. Relief from the pressure removes the discharge. The multiplicity of glands in the turbinated tissue, makes it unnecessary to look for any other source for the secretion.

I pursue the same method mentioned in anterior hypertrophies in excising the localized and general thickenings over the septum. These projections, when situated anteriorly upon the triangular cartilage, can be readily removed. The localized hypertrophies found over the vomer are sometimes difficult to remove, as the tissue is transfixed and snared when pictured in the rhinoscopic mirror. Recognizing the floor of the nose as a gutter for the *efflux* of the nasal secretions, the thickened tissue over the septum often constitutes one of the most serious obstructions to drainage. There is probably no condition more favorable for the development of nasal catarrh than a distorted nasal gutter. Retention of the nasal secretions must lead to the formation of inspissated masses of mucus, which act as most powerful intra-nasal irritants. It is obvious that only temporary relief can be obtained in these conditions by the use of cleansing or medicated sprays.

When the thickened tissue is in contact with the outer wall of the nose, I make use of the No. 3 curved transfixion needle, which has its point at a right angle with the shaft. By successively hooking and snaring off pieces of the septum, it is possible to make an opening into the posterior nares. The patient practice of this method has enabled me to perforate even an imperforate nostril. Deviations of the cartilaginous septum can be easily removed in the same manner.

Especially brilliant results can be obtained in relieving the common deformity caused by displacement of the cartilage of the columna. Nasal stenosis caused by a deviated cartilage is always overcome by the careful practice of this method without perforating the septum. I would strongly urge this procedure to supply the place of the now general practice of perforating the septum with a punch. When the enthusiastic advocates of this operation explain away the years of discomfort caused by the collection and inspissation of nasal mucus around the edges of these false openings, I may consider their claims for its superiority.

The écraseur is particularly adapted for the removal of gelatinous polypi. The elastic loop can be easily made to enter a nostril filled with impacted polypi, and the fine steel ring will, with absolute certainty, engage each polyp in turn until the meatuses are completely cleared. It is not necessary to follow the loop with the eye, for when even a small part of the polyp has been encircled by the snare, each turn of the nut will draw the wire nearer to the pedicle. I believe a small portion of the mucous membrane at the base of the polypus is often removed with the growth, thus effectually preventing its return. The recurrence of gelatinous polypi may be referred to a development of the embryonic clusters I have already spoken of.

I attach much importance to the removal of every vestige of a nasal polypus, since an apparently insignificant growth of the kind may, by irritation, keep up a chronic nasal catarrh.

Professor Bosworth has successfully removed adenomata of the vault of the pharynx, by carrying the écraseur armed with a large wire loop through the naso-pharyngeal space against the base of these glandular hypertrophies.

CONCLUSIONS.

In concluding, I would urge the adoption of these simple but effective methods for the removal of intra-nasal growths, as they possess manifold advantages over the other modes hitherto recommended. The painlessness of the operations in most cases, the small amount of blood lost, the ease with which they are performed and the decided and beneficial results obtained, all combine to make them valuable. The barbarous method of evulsion, with all its train of terrible suffering and torn and bleeding tissues, needs no comment. The use of the ligature and injection of acids, followed by the intended result, a mass of putrefying tissue in the delicate organ of smell, cannot be too strongly condemned. Those who have witnessed the manipulations of a galvano-cautery battery, with all its world of complicated attachments and ingenious movements, may with reason demand a simpler and more reliable mode of operating. I have intentionally omitted some of the minutiæ of the operations, but trust and believe that, by giving them a fair trial, you will be satisfied with the results and convinced that my claims for their superiority are not overestimated.

123 East Twenty-fifth Street.

POISONING BY SULPHATE OF COPPER—HÆMOGLOBINURIA—DEATH—AUTOPSY.

By M. ALLEN STARR, A.M., M.D.,

LATE HOUSE PHYSICIAN, BELLEVUE HOSPITAL.

The patient, a well-nourished woman, aged forty-six, took about one ounce of sulphate of copper dissolved in tea, at 9 P.M., December 13th, with suicidal intent. As soon as she had swallowed it, she felt a burning sensation in her stomach and all over her body, and becoming alarmed she told a neighbor, who summoned a policeman. He took her at once to a station-house. On the way she vomited three or four times, and before reaching it began to feel very weak and to suffer from severe pain and cramps in her stomach. At the station-house she was given stimulants, and, on the arrival of the ambulance-surgeon, large draughts of warm water and flour. This produced free emesis. At 11 P.M., two hours after taking the poison, she was brought into Bellevue Hospital.

On admission, patient was very weak and unable to stand or to walk. Her surface was cool and dry; pulse, full, strong, 112 per minute; respiration natural, 24 per minute. She complained of faintness, and of cramps in her stomach and legs. She was put to bed at once, and the tube of the stomach-pump having been introduced, the stomach was washed out with warm water. It was noticed that the material first obtained from the stomach was grayish-green in color. This was afterward found to contain copper. After a few minutes yellow ferrocyanide of potassium was obtained, and twenty grains added to one pint of warm water. This was thrown into the stomach, and on being drawn out the water was seen to have assumed a brown color, indicating that the chemical change to ferrocyanide of copper had taken place. This injection was therefore continued, the amount of the potash salt being decreased as the brown color became less marked.

When the water returned perfectly clear and colorless, the process was stopped. During this time (about forty minutes) the patient had complained constantly of pain in her stomach and of cramps in her legs; and had had several fluid evacuations. Before the tube was withdrawn, three ounces of a mixture of castor-oil and olive-oil were thrown into the stomach. A portion of this was rejected. Patient was then given half an ounce of whiskey hypodermically, as the pulse had become more weak, small, and rapid—128 per minute. She was ordered twenty grains bismuth, in milk, four ounces every two hours.

December 14th.—Patient vomited several times during the night, and had three loose brown movements not containing blood. She complained much of abdominal pain and of cramps in her legs. This morning she has less pain, but is very tender over the epigastrium. The cramps occur at longer intervals. She complains of frontal headache and feels very weak. There is no febrile movement, and her pulse is regular, strong, 100 per minute; respiration normal; skin cool and dry. Her mental condition is good; no affection of the senses; the pupils are normal and react to light. Ordered poultices to abdomen; a mixture of bismuth in mucilage; and small amounts of milk frequently repeated. During the day the patient was quite comfortable, did not vomit, had less pain, but had several diarrhœal movements attended with tenesmus. Her urine was diminished in quantity but, as it was passed with the movements, could not be measured. Its color was normal.

December 15th.—Patient had a quiet night and slept. This morning she has some pain and tenderness in the epigastrium, but has not suffered from cramps since yesterday afternoon. She has not vomited and to-day takes her milk readily. She had during the night and continues to have to-day occasional painful fluid movements, small in amount, brown in color, containing gray masses of fæces, but no blood. Her headache continues. At noon to-day she complained of pain in the hypogastrium, and began to pass small amounts of urine frequently. Micturition was attended with burning pains in the urethra. The urine was found to be very dark, reddish black in color, almost like ink. It is turbid, does not transmit light, has a specific gravity 1.014, is acid, and contains a large amount of albumen. On boiling, the coagulum was lighter than ordinary albumen, and floated to the top of the specimen. The substratum of urine was changed to a lighter color. On the addition of acetic acid the albumen was partly dissolved, and the substratum of liquid regained its original color. Heller's test also demonstrated the presence of albumen. Microscopic examination of the thick sediment which collected on standing showed the presence of a large amount of fine granular matter stained brown. This was in irregular masses, and also in the shape of casts. There were a few epithelial casts, and some epithelial cells from the kidney. Careful examination failed to detect the presence of any blood-corpuscles. A portion of the granular matter was dried upon an object glass, common salt was rubbed into it, a hair laid across, a cover-glass applied, and a drop of glacial acetic acid allowed to enter beneath the cover. The slide was then warmed and subjected to examination under the microscope with power of 600 diameters. Crystals of hæmatin were to be seen, though not in great numbers. A specimen was then examined with the spectroscope, when the two absorption bands between D and E, characteristic of oxyhæmoglobine, were distinctly brought out. These tests were sufficient to establish the fact that the patient had developed hæmoglobinuria. Microscopic examination of the blood showed a slight relative increase of white corpuscles. The red corpuscles were not decolorized, and no microcytes were visible. The same treatment was continued with the addition of small doses of opium to allay the abdominal pain and control the action of the bowels.

December 16th.—This morning the patient is found to be moderately jaundiced. She passed a quiet night; had no movements, and did not vomit. She made about forty-five ounces of urine during the past twenty-four hours; appearance and contents the same as yesterday. To-day the abdominal tenderness continues, but is less marked over the hepatic region than elsewhere. There is no fever, but the pulse is more rapid, 120 per minute, and is now quite small. Respiration is also increased to 30 per minute. Her general condition is better than yesterday, on account of the cessation of all gastric symptoms and of the diarrhœa. She takes her milk with relish. She is perfectly conscious and rational, but is more quiet, and seems inclined to sleep. The only complaint is that of painful micturition. When questioned she says that she has slight headache. Opium stopped.

December 17th.—Patient had a restless night and refused nourishment. This morning she seems to be weaker, and is rather somnolent. She complains of frontal headache, and of pain in the lumbar regions, but says that the abdominal pain has ceased. The abdomen is relaxed, not tympanitic, but pressure develops tenderness all over it. She has not vomited, and has had no movement during the past twenty-four hours. She retains her milk, but has no desire for food, her tongue being still thickly coated and gray. Her throat is not sore. Eyesight and hearing are perfect, and sensation good. Her pulse is feeble, small, and rapid, 120 per minute, respiration 30, and for the first time since admission there is some fever, temperature being 100¼°. There is a slight increase in the jaundice, the color of the skin being a peculiar grayish yellow. She passed fifty ounces of urine during the past twenty-four hours. It presents the same chemical characteristics, and is almost like black ink in color. Her motions indicate weakness, but there is no paralysis.

Toward evening it was evident that the patient was failing rapidly. Her mental condition was stupid, so that she could not be induced to make various motions that were desired to test coördination. There was evidently general paresis, as she could no longer turn herself in bed or hold a cup. Sensation was not impaired. At four P.M., temperature 101¼°, pulse very small but regular, 128; respiration, 34. Stimulation was given by the rectum, but was rejected, and the discharge was followed by a movement containing semi-solid black fæces. She is now unable to swallow. At 9 P.M. the patient had sunk into a semi-comatose condition, and, when aroused, seemed unable to make any voluntary motions. Sensation was decidedly impaired, or else she was too stupid to notice irritation. Pupils were contracted and no longer reacted to light. Nutritive enemata were not retained, and the urine was passed unconsciously. Temperature 98¾°, pulse 140, respiration 40. From this time she lay in a state of coma, and at two A.M., December 18th, died.

Autopsy twelve hours after death. Dr. Welch present.

Body.—Rigor mortis extreme. Whole surface uniformly jaundiced. No ecchymoses.

Brain.—The membranes were tinted a grayish yellow color. A considerable amount of clear serum was present beneath the pia mater. No meningitis. No marked congestion. Surface of the brain was a pale gray color, evidently tinted like the membranes. Brain was wet, but there was no excess of fluid in the ventricles. Substance normal. Cord not examined.

Thorax.—On opening the body it was noticed that the muscles, connective tissue, fat, and all the organs presented a grayish yellow appearance. All the blood in the body was firmly clotted in the veins. The clots were a light brownish red color, resembling chocolate, and very consistent, so that they retained their form on being taken out of the veins. There was no fluid blood in the body.

Pericardium.—No adhesions, no excess of fluid. *Heart*, normal size. Both ventricles were filled with dark clots. Heart-muscle flabby, and on section fatty. A mottling was noticed beneath the endocardium, most marked on the papillary muscles. Microscopic examination showed well-marked fatty degeneration of the muscular tissue. *Aorta* atheromatous.

Pleuræ.—Old adhesions on both sides. No fluid in the cavities.

Lungs.—Slight yellowish brown coloration of the surface of the lungs. No subserous ecchymoses. Both lungs extremely œdematous. The fluid squeezed from them was yellow in color. Substance of lungs normal.

Abdomen contained no fluid. *Spleen* normal in size and consistence.

Stomach contained a large quantity of semi-solid material, greenish white in color, apparently half-digested milk. This was tested and contained no copper. There was but slight evidence of gastritis, consisting only in mild congestion. No ecchymoses and no ulceration.

Œsophagus.—Pseudo-membranous patches of gray color and ulcerations near the stomach.

Intestines.—Duodenum empty. It was deeply stained with bile. The ductus communis choledochus was pervious. Jejunum in its upper three quarters was free from inflammation. It contained green semi-solid masses. Ileum contained thick hard masses, green in color. These masses did not give any reaction on the addition of aqua ammonia. For sixteen inches along the lower part of the ileum there was extensive ulceration, with the formation of sloughs and loss of substance on the mucous coat. The ulceration was unevenly distributed through the ileum, and not confined to the region of Peyer's patches. It extended upward into the jejunum, but was less marked than below. The large intestine contained large masses of pasty dark-green fæces, which distended it greatly. When these were washed out, numerous losses of substance were seen on the surface of the mucous membrane. There were no distinct ulcers.

Liver.—Uniform brownish yellow color, soft in consistence, normal size, somewhat fatty. Microscopic examination showed extensive fatty degeneration of the hepatic cells. The fat existed in large globules and not in small molecules.

Gall-bladder was moderately distended with very thick black bile; this bile was found to contain copper. The bladder contained a small gallstone; gall-duct and bile-ducts not obstructed.

Pancreas normal.

Kidneys, slightly enlarged; capsule adherent; surface mottled with very dark brownish red and gray colors, giving a marbled appearance; substance soft. Cut surface nearly uniform dark brownish red, and little distinction to be noticed between the cortex and medulla. Cortex was swollen, and striated appearance not present. The mucous membrane of the pelvis was gray in color, was coated with a thin layer of mucus and studded with minute ulcers, round in shape. Microscopic examination showed the tubules of the kidney to be filled with granular matter stained red, and similar to that found in the urine. The cells lining the tubules were swollen; the Malpighian tufts were compressed and a free space existed between the tuft and its capsule, such as is said to appear when a large amount of albumen has been excreted. The capsule of the tuft was moderately thickened; the capillary walls were thickened; no granular matter in the vessels.

Ureters normal. *Bladder* contained some dark red urine; the mucous membrane was uniformly stained a pink color; no cystitis.

Uterus.—At each cornu, small intramural fibromata. The Fallopian tube on the right side was distended with dark-red fluid; its fimbriated extremity obliterated; on left side there was a small cyst in the broad ligament.

The medico-legal importance of the case warrants its publication. The number of cases of sulphate of copper poisoning reported is small, and in but a few is there a record of an autopsy. In no reported case is there any mention of the occurrence of hæmoglobinuria.

First.—The dose of the poison taken was sufficient to cause death from gastro-intestinal inflammation, and the autopsy revealed some enteritis. This lesion has been found in every case of poisoning reported, but in most cases its extent has been greater, and the symptoms more marked. Whether the emetic action of the salt had prevented any great amount from remaining in the stomach, or whether the injection into the stomach of a solution of the chemical antidote was so far successful, may be uncertain. The limitation of the inflammation to the ileum may be explained by supposing that the copper which had entered the intestine before the patient reached the hospital was washed through the upper part of the gut by the fluids thrown into the stomach and by the castor-oil, so that it did not remain in contact with the mucous membrane long enough to produce a local action until it reached the ileum, where it remained. The absence of any serious gastritis was indicated during life by the cessation of vomiting and the retention of milk. The case thus supports the statements advanced by Christison, Taylor, Maschka, and Ziemssen, that the gastric symptoms are less marked than those due to the disturbance of the nervous system, and that death results from secondary effects due to the absorption of the poison rather than from gastro-intestinal irritation, and hence is seldom immediate.

Second.—Much difference of opinion exists among writers on toxicology as to the symptoms of jaundice after copper poisoning. Christison quotes three cases—those of Orfila, Pyl, and Wildberg, in which jaundice occurred. Taylor, Ziemssen, and Murchison allude to these cases and cite Christison as authority for the occurrence of this symptom. But they throw some doubt upon its frequency, and deny having seen any cases. Murchison, though admit-

ting that in phosphorus poisoning the jaundice has a blood origin, and claiming that it must be ascribed to an abnormal process of metamorphosis due to the fatty degeneration of the liver, prefers to consider the jaundice spoken of in copper poisoning as obstructive, and caused by duodenitis. Huseman and Maschka support the position of Christison in opposition to the other writers, and each relates a case in which there was jaundice.* In the report of the discussion of the Société de Biologie, in Paris, 1877, on the subject of copper poisoning (to be found in *Comptes Rendus*, 1877, by M. Galippe), jaundice is mentioned as a rare symptom, and its origin is not discussed. In the case herewith reported, jaundice appeared about fifty hours after the poison was taken, and about twenty hours after the hæmoglobinuria began. The autopsy showed that the bile-duct was pervious, and that there was no duodenitis. It seems certain therefore that the jaundice was not obstructive. As the liver was in a state of acute fatty degeneration, such as occurs in poisoning by phosphorus, the explanation of Murchison may apply.

It seems more likely, however, that the jaundice was dependent upon the dissolution of red blood-globules and the setting free of the hæmoglobine, a condition of which the hæmoglobinuria gave evidence. In support of this position, Dr. Flint's recent work may be cited. He says: "It is generally considered as established that under certain pathological conditions a pigment analogous to, if not identical with, that of bilirubin may be a result of the destruction of red corpuscles irrespective of any action of the liver, giving rise to the same appearances as when bile is reabsorbed" (p. 636). This case, therefore, establishes the fact that jaundice may occur, and that it may be hematogenous in origin.

Third.—Hæmoglobinuria, as before stated, is a symptom whose occurrence has never before been noted after poisoning by sulphate of copper. All writers speak of a diminution or suppression of urine, but none makes any note of abnormal appearances. The only case at all similar is reported by Maschka (op. cit.), in which the urine contained "blood, albumen, and bile," but he omits to state whether a microscopic examination showed blood-corpuscles. The medical literature for the past ten years contains a number of cases of copper-poisoning, but in none did this symptom occur, nor was it noticed in the exhaustive discussion of the subject by the Société de Biologie before alluded to.† It seems probable, therefore, that the case is unique. Hæmoglobinuria is a condition which has been noticed after poisoning by phosphorus, and after the inhalation of carbonic acid, hydrocyanic acid, and arseniuretted hydrogen gases. It occurs in the course of scurvy, and purpura hemorrhagica, after typhus and scarlet fever, after tne transfusion of blood, and occasionally in hemophilia. It has been produced by the injection of glycerine into the blood.‡ It has occurred as a paroxysmal disease after exposure to cold, or under certain malarial conditions. It has been noticed as an epidemic disease among the new-born, seventy-eight per cent. of the babes born in Dresden during March and April, 1879, having died of it.* All authorities agree that it has its origin in the blood and not in the kidneys. Any substance which, when absorbed into the blood, has the power to dissolve or destroy the blood-globules, will thereby set free the coloring matter contained in them. This, under normal conditions, changes partly into biliary or urinary pigment and partly goes to nourish the muscular tissue.† When, however, large quantities of the blood-corpuscles are suddenly decomposed, the amount of hæmoglobine set free is too great to undergo these changes. It then circulates as oxyhæmoglobine and methæmoglobine in the blood, and in the form of methæmoglobine is excreted by the kidneys, being a crystallizable substance, and therefore passing readily through animal membranes.‡ True hæmoglobinuria in which no blood-globules are found in the urine, is very rare, but associated with hæmaturia it is not uncommon. The diagnosis rests on the presence of hæmatin determined by the spectroscopic examination, and by obtaining the crystals in urine which contains no blood globules. In such urine there is always albumen, and also a sediment consisting of colored epithelia, granular matter, and casts. These were all found in the present case, and an examination of the kidneys showed similar collections of granular matter in the tubules. It has been stated by Neubauer and Vogel that the pigment collects in the vessels, and by obstructing the capillaries may cause serious symptoms. But examination in this case failed to show any such collection in the vessels. Indeed, the contrast between the vessels which were either empty or full of corpuscles, and the tubules plugged by the granular matter, was very striking. A similar condition of the kidney was noticed in a case of hæmoglobinuria following scarlet fever.§ That the presence of copper in some form in the blood may set free hæmoglobine, either by directly destroying the corpuscles, or by combining with those salts in the plasma which are necessary to prevent the solution of the globules, is proven by this case.

Fourth.—The question naturally arises whether death was caused by the action of the poison on the nervous system, or was due to a general disintegration of the blood-globules and consequent lack of oxygen in all the tissues. The latter seems possible for the following reasons: The blood presented a peculiar appearance after death, was firmly coagulated, and of the color of chocolate. All the tissues of the body were stained, showing that the amount of hæmoglobine set free was great. The urine was passed in large amount (fifty ounces per diem), and contained a great deal of hæmoglobine. The hurried respiration, which rose to 30 per minute during the last thirty-six hours, may have indicated a desire for oxygen incident upon the diminished oxygen-carrying power of the blood. On the other hand, many nervous symptoms mentioned in the books—such as paralysis, anæsthesia, twitchings and convulsions, affection of the pupils and sight—did not appear in this case, stupor being the chief nervous phenomenon until within a few hours of death. That a diminution of the normal amount of hæmoglobine in the blood may be a cause of death is well known, the researches of Quinquand ("Études

* Maschka: Handbuch der Gerichtlichen Medicin, Art. Kupfervergiftung. 1881. Huseman: Jahresbericht der Medicin, 1878, I., s. 391.

† I may state that I have examined the American, English, French, and German Retrospects and Year Books, and the chief periodicals for the past ten years very carefully on this point.

‡ Case reported by Schwann in Eckhardt's Beiträge fur Anat. u. Phys., 1860, p. 634.

* Bursch Herschen: feld Handbuch der Kinder Krankheiten, vol. iv.

† Neubauer u. Vogel Urin., p. 311.

‡ Hoppe-Seyler: Phys. Chemie, art. Hæmoglobin. Seidel Real Cyclo. der Heilkunde, 1881, art. Hæmoglobin.

§ Wissensch: Central-Blatt für Medicin, 1879, p. 649.

Hæmatologiques:" *Archives de Med.*, 1879), and of Hoppe-Seyler (*Physiol. Chemie*), having demonstrated that, when the amount of hæmoglobine in one thousand grammes of blood is reduced from one hundred and twenty-five grammes, its normal figure, to forty grammes, death follows from lack of oxygen. The symptoms of such a fatal termination do not differ materially from those observed in the case reported here. In any future case it would be well to observe the symptoms with this theory in view, and also to make quantitative analyses of the blood to determine the per cent. of hæmoglobine present.

In conclusion, I desire to acknowledge to Drs. Welch and Doremus my thanks for their assistance in conducting the microscopic and chemical examinations.

DETECTION OF GALL-STONES BY THE EXPLORING NEEDLE.

By JAMES T. WHITTAKER, M.D.,

CINCINNATI, O.

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE, MEDICAL COLLEGE OF OHIO.

The diagnosis of cholelithiasis is sometimes very simple and very easy. The characteristic colic, the occasional jaundice, the constipation, the duodenal catarrh, occurring in a female after the meridian of life, leave scarcely a doubt as to the nature of the disease. The discovery of gall-stones in the discharges makes the diagnosis sure. And in the majority of cases gall-stones may be detected in the discharges if the precaution be taken, perseveringly, to pass the fæces through a sieve. Murchison says that Wolf, "who took the pains to examine the fæces sometimes for months after an attack of biliary colic, never failed to find gall-stones in one of forty-five cases of biliary colic occurring in his practice during a period of forty-three years."

Nevertheless, many cases of cholelithiasis are exceedingly obscure. No one sign of the condition is pathognomonic; no one sign is even constantly present. Hepatic colic is sometimes absent, and is often simulated by hepatic neuralgia; icterus, *per se*, possesses no diagnostic importance, von Schneppel remarks, as it may be present in many other conditions and be absent in hepatic colic; duodenal catarrh occurs oftener without than with gall-stones; the male sex is affected in one-third of all the cases, and no age is entirely exempt. Moreover, the passage of the stones affords no absolute indication of the condition left. Ewald expresses the conviction of every practitioner of wide experience, when he says: "*In vielen Fällen ist es unmöglich eine Differential diagnose zu stellen*" (In many cases it is impossible to make a differential diagnosis). We might add that an absolute diagnosis can be made in no case. In every case there is some room for doubt. For all the indications may be present, and cancer, echinococcus, abscess of the liver, or any pressure from without be entirely excluded, and yet the gall-ducts may be blocked only by inflammatory thickening of their walls, or by inspissated bile.

Any means, therefore, which will safely and surely detect the presence of a gall-stone will be received with satisfaction, and that such a means exists is proven by the history of the following case.

H. B——, aged seventy-six, has been deeply jaundiced for six months. During this time he has lost fifty pounds in weight. His stools are like putty; his urine has the color of tar. His general strength is so much reduced that he is not able to sit up longer than half an hour. He is tortured with tinnitus aurium. He has no appetite, and is profoundly dejected.

The liver is enlarged; its free border projects two and one-half inches below the margin of the ribs. The gall-bladder constitutes a large tumor, of the size of the fist, smooth, globular, and movable. There is some apparently slight ascites. It was apparent that the condition depended upon total occlusion of the common duct.

The diagnosis rested between gall-stone and cancer. In favor of cancer was the enlargement of the liver and the ascites. In favor of gall-stone was the condition of the gall-bladder. Against both conditions was the total absence of pain. He was a very intelligent man, and he stoutly maintained that he had never had an attack of pain. His daughter stated that he had suffered from pain five years ago, a fact which he could not recollect, but had never had pain since. Against cancer was the absence of any primary deposit.

In order to definitely determine the diagnosis, I concluded to explore the gall-bladder. Having fixed it by compression from below upward against the liver, I introduced the needle of the hypodermic syringe and withdrew it full of thin clear bile. On the next day, April 20th, I fixed the gall-bladder, as before, and gradually and slowly pushed through the abdominal parietes, just below the gall-bladder, a long fine needle, in fact, the longest and finest needle of the Dieulafoy aspirator set. After penetration of the peritoneum, there was no resistance whatever—it was as if in empty space—to the further progress of the needle, which I advanced slowly and in a straight line in the direction, as nearly as could be determined, of the common choledochus duct. At the depth of four and three-fourths inches I struck a stone. The sensation was perfectly clear and distinct. It was a fine delicate crepitus, unmistakable in its character. After penetration of the skin, there was no sensation whatever on the part of the patient. The needle was then withdrawn, and the patient experienced no more discomfort than after a hypodermic injection. Having had all the dangers of cholelithectomy freely set before him, in the presence of his family, and fully recognizing that he was slowly dying by inanition, feeling "life not worth living," as he said, he elected to take the risks of the operation, which I asked one of my surgical colleagues, Dr. Joseph Rausohoff, to perform. Dr. Rausohoff expressed the very natural desire to feel the stone himself before undertaking such a dangerous operation. Accordingly, on April 29th, we proceeded to repeat the exploration of the week before. I had the good fortune to strike the stone at once, as upon the previous occasion. Thereupon I put the end of the needle in his hands, but he failed to feel the crepitus, nor could I feel it when I took it from him. It had evidently glided off. Thereupon I explored in various directions, very gently, of course, partially withdrawing it and re-inserting it twice, when I again came upon the stone. This time Dr. Rausohoff felt it, too, perfectly distinctly, and withdrew the needle, convinced of the presence of the stone.

May 3d, Dr. Rausohoff, in the presence, and with the assistance of Dr. Dunbam, a former physician of the patient; Dr. Cilley, Demonstrator of Anatomy; Dr. Kebler, Lecturer on Histology; Dr. French, my assistant; Mr. R. Davis, my student, a son-in-law of

the patient, and myself, removed two large stones, weighing respectively 138 and 162 grains, one of which was firmly wedged into the cystic duct, and three small stones, weighing 9, 5, and 4 grains.

Of the method of operating and the cause of the fatal result, which occurred on the day following the operation, I have nothing to say. These details will probably be reported in full by the operating surgeon. I desire merely to call attention to the ease, impunity. and I might almost say, unconsciousness on the part of the patient, with which these gall-stones were detected *in situ* by means of a long exploring needle.

Petit, 1733, first proposed the operation of cholecystotomy, and (according to Hartshorne) Le Dran, Morgagni, Good, Handfield Jones, Maunder, Hughlings Jackson, and Thudicum "have referred to the operation as justifiable and practicable." Dr. Bartholow, my predecessor in the chair of practice, first actually performed the operation of aspirating the gall-bladder, and sounding the cystic duct, in a case of echinococcus of the liver in 1876, and a number of cases have been since reported by Brown, Sims, Keen, Bryant, and Lawson Tait (Hartshorne's comment on Goodeve's article, "Reynolds' System"); but, so far as I have been able to discover, it has hitherto occurred to no one to detect a stone in the gall-ducts by this simplest, safest, and surest of all the procedures tried, viz., exploration with a needle.

ANTE-PARTUM HOUR-GLASS CONTRACTION OF THE UTERUS.

By WILLIAM L. BRADLEY, M.D.,
NEW HAVEN, CONN.

The so-called strictures of the uterus, which are rather frequent during the third stage of delivery, are very rare, indeed, before the expulsion of the child. In the following case the existence of a tonic contraction of the circular muscular fibres of the upper portion of the uterus was demonstrated by repeated introductions of the hand into the uterus; and therefore it may be classed with the thirty similar cases which have recently been collated and published by Dr. Thomas C. Smith (*American Journal of Obstetrics*, 1882, vol. xv., p. 294).

November 15, 1876, I was requested by Dr. Henry Pierpont to assist him in a case of obstetrics which, previous to his being called, had been under the care of a professional midwife. I found a woman about thirty-five years of age, apparently of delicate constitution, who had been thirty-six hours in her fourth labor. Her pulse was feeble, and indicated threatening exhaustion. The cervix was fully dilated, the liquor amnii had been discharged, and the uterus was firmly contracted. In her first labor she had been delivered by forceps of a still-born child, and in the second and third labor, the head being smaller, the delivery was without difficulty. In the present instance an examination showed that a very large head was presenting, and that the antero-posterior diameter of the pelvis was somewhat contracted. The occiput lay toward the right acetabulum, and, although the forceps was readily applied, all my efforts, seconded by those of Dr. Pierpont, failed to accomplish the descent of the head. To facilitate version, complete muscular relaxation was obtained by the full administration of chloroform. My hand easily passed the head and thorax of the child, but was arrested in its progress and rendered useless by a powerful tonic contraction of the upper half of the uterus, in which the pelvis and lower extremities were firmly enclosed. The border of the placenta was slightly detached in the attempt to pass the constriction, in which it was partially included. Becoming fatigued, I was relieved by Dr. Pierpont, who met with the same obstruction, but succeeded in squeezing two fingers far enough through the contraction to seize the feet and bring them down to the brim of the pelvis. Having retained the feet by a strong loop, I performed craniotomy, and then version was completed by the bi-manual method. The arms were now brought down, and forceps was applied, but before delivery could be accomplished, the woman died from exhaustion.

The foregoing case was reported February 26, 1877, at a meeting of the New Haven Medical Association, and, so far as my knowledge extends, no other similar case has been reported in the State.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

Service of WM. GOODELL, M.D.,
PROFESSOR OF CLINICAL GYNECOLOGY.
(Reported by Guy Hinsdale, M.D.)

TWO CASES OF ABDOMINAL TUMOR.

Here is a girl who has had for several years a tumor in the abdomen. It has been supposed to be an ovarian tumor, and was sent here as such. It is unusually high up for an ovarian tumor, but it may have a very long pedicle. I have to push it down to get it in the neighborhood of the uterus. I thought at first that it was a phantom tumor, then I thought it might have something to do with the liver, since it is high up and upon the right side, possibly a distended gall-bladder. The first thing to do in forming our diagnosis is to draw off the urine.

If this be an ovarian tumor, we should have some movement communicated to it when I move the womb, unless its pedicle be very long. As I move the uterus about with the sound, you see a very slight movement of the tumor; it is hardly perceptible. Then, again, it may be a cyst of the broad ligament. The uterine sound passes three and one-half inches. Movement of the tumor communicates a very slight motion to the uterus, as you can see by watching the sound. It seems to me that there is some attachment of the tumor to the uterus. The proper thing to do is to aspirate this tumor.

Don't forget that in doubtful abdominal tumors you must always pass the catheter; it will save you, some time, from getting into a scrape. How do you pass the catheter? If you fumble about and cannot, for any reason, pass it readily, do not hesitate to use your eyesight; ask for a candle, and see what you are doing. It is very often necessary to catheterize a woman after labor. The best way to do is to pass your index finger into the vagina, and directly above it feel the opening of the urethra with your thumb. Then, with your thumb as a guide, pass the instrument. Another way is to place the index finger directly over the meatus; this, however, is uncertain, and you may in doing so touch the clitoris, which you should always be careful to avoid. If you have

to fumble about, don't hesitate, as I say, to call for a light.

A man on his native heath knows all the nooks and crannies about him; he is perfectly at home. So I push the tumor down as far as I can toward the pelvis, for here I feel that I am on familiar ground. There are no arteries to be afraid of, and taking the needle of the aspirator, I make a bold plunge in the linea aspera. A clear liquid flows out. What in the world a cyst of the broad ligament is doing so high up as this one, I don't know. It has no business there. It is possible that it has contracted adhesions to the omentum, and is dragged upward by it.

I have now under my care a lady who has a bursting cyst of the abdomen. These cysts of the broad ligament are very liable to burst. One of the parovarian tubules becomes plugged up and forms a retention cyst, if you choose to call it so. The walls are very thin, and in the case I allude to, the tumor bursts about every three weeks, after attaining the size of a lemon. In one case which I had, the cyst burst four times, and was tapped some ten times. Finally, I removed it successfully, and found but one adhesion, and that was to the omentum. This explained a severe pain the lady always suffered when the cyst burst, or when it was emptied by tapping; for the collapsed cyst then dragged down the omentum. The lady has been perfectly well ever since.

The fluid which I am now pumping out is not quite clear enough for a cyst of the broad ligament. Still, there is a little blood in it which discolors it. On the other hand, it is not quite thick enough for an ovarian fluid. I shall give it to Dr. Formad, who will examine it for ovarian cells.

Here are different fluids which I have removed in this amphitheatre at different times. These are two perfectly clear fluids from cysts of the broad ligament; one was removed in 1874, and the other early in 1880, yet they retain their perfect limpidity. Here is a fluid removed from an ovarian cyst; it is dark and coffee-colored; and here is another not quite so dark.

Our next patient is thirty-two years of age, and has been married nine years. She has had three children and two miscarriages, the last miscarriage in February, 1879, nearly three years ago. Shortly after this the tumor began to form and has been growing ever since. She has been losing blood every day, she tells me, a few drops at a time, coming from the vagina and often in black clots. She knows, however, when her monthlies come.

If a lady were to come to me without any tumor, and tell me that she was constantly losing small quantities of blood from the womb between the monthly periods, I should say to myself that one of two lesions existed, either a polypus or a cancer of the cervix. Fibroid tumors of the womb do not usually cause a prolonged blood-dribbling; they will induce, as you well know, excessive menstruation, and so will a polypus, but they do not often cause the bleeding between the periods.

Is this a uterine tumor? She tells us that, at her monthlies, she doesn't lose too much. If we are dealing with a fibroid, we should expect it to produce a free flow at her monthlies. I ask her to let me uncover her face and see her tongue. She has the *facies uterina*. She has been losing flesh and has an anxious expression. When you see a face like that it means pelvic trouble. This is especially seen in the advanced stages of ovarian disease and is so characteristic of that condition that it has been termed the *facies ovariana*.

The diagnosis of these abdominal tumors is sometimes as easy as can be, but it may also be as difficult as can be. As I tap lightly upon one portion of this tumor, there is no fluctuation that I can perceive, but, as I reach the other side, I get a wave that can be transmitted, and I can outline the area over which fluctuation is felt. This variation in the sense of fluctuation means that we have different cysts. The wave, however, isn't plain; it is not of a marked kind. Here, over the right portion of the tumor, I don't get any fluctuation at all. I have no doubt that we have, in this case, a mother-cyst with a number of child-cysts, each one containing fluid of varying density.

But how do I know that it is not dropsy of the abdomen? If the fluid were free, as in ascites, the intestines would float up to the surface, and we should have resonance above; whereas the fluid, gravitating to the sides and most dependent portions, would produce a bulging and the percussion-note would be dull. As I percuss, you notice that there is a semi-resonance over the ascending, transverse, and descending colon. There is, in fact, a coronal resonance, but, at the same time, a dulness over the front of the tumor. Furthermore, as the patient lies on her back, the abdomen presents a convex front, and her form is unchanged. If, now, there were ascites here this surface would flatten, through gravity of the fluid toward the back and flanks. You would also find ascitic fluid displaceable by pressing on the abdomen; but there is nothing of the kind in this case.

The patient's history and our examination make it easy for us to exclude pregnancy as a possible cause of this tumor. I introduce the uterine sound and get a measurement of two and a half inches; but I am not satisfied with that measurement in a woman who has borne children. I try it again. You see I can move the womb easily with the sound. I have now hit the fundus and the pressure hurts her. This time we have a measurement of plus two and a half inches, almost three. I do not find any polypus whatever. There is an intense congestion of the womb; it contains more blood than it ought; a digital examination shows me that the womb is anteflexed.

I am disposed to say that this is a cyst of the left ovary. I asked her if she has been obliged to pull out hairs from her lip and chin? She says not. Often, in cases of ovarian disease, and especially when double, a hirsute development is found upon the chin and a small beard will grow, which will need a razor.

You might be asked, "Can it not be a malignant tumor?" and, from the fact that the patient has not suffered pain during its growth, one might be led astray. But, as I said the other day, these tumors may develop without any pain whatever, and yet be very malignant. In all these cases we must remember that there is no such thing as infallibility, and that the best physician is not the man who makes no blunders, but who makes the fewest blunders.

The real point at issue is, Is this a uterine tumor or is it ovarian? I am satisfied to think that it is a cyst of the left ovary, a multilocular cyst, one or more of the subdivisions of which yields a fluctuation which is not marked, because filled with a colloid material.

I shall now aspirate the tumor; and here let me

show you a wrinkle worth knowing. I shall freeze the skin at the point of puncture by a freezing mixture of a lump of ice dipped into some table salt. Now I plunge in the needle, without, as you see, a wince of pain on the part of our patient. A straw-colored, syrupy fluid is pumped out, but the right side of the abdomen does not collapse. This shows the presence of another cyst. Without withdrawing the needle, I direct its point into this cyst, but I get nothing but a few drops of colloid material. The contents are too thick to flow. While we are waiting for this fluid to be removed, if possible, let me give you some golden rules about tapping.

First.—Instead of the old-fashioned trocar always use the hollow needle of the aspirator.

Second.—Always empty the cyst if you can possibly do so. This prevents the escape of fluid into the abdominal cavity, and consequently lessens the liability of peritonitis.

Third.—Plunge the needle preferably in the linea alba, where there are very few blood-vessels; and very rarely aspirate *per vaginam*, where many blood-vessels exist.

Fourth.—If, after tapping, the cyst inflames and septic symptoms set in, at once perform the operation of ovariotomy: this alone will save your patient.

NOTE.—The first patient recovered from the operation, and for two months there has been no return. On December 8, 1881, two weeks after tapping, the second patient was operated upon by Dr. Goodell before a ward-class of students. The left ovary had degenerated into a multilocular cyst, containing both clear fluid and colloid matter in separate cysts. This ovary, together with the right one, which was beginning to undergo cystic degeneration, was removed. The patient recovered promptly, and two weeks later was exhibited before the class.

BICHROMATE OF POTASSA AS A CAUSE OF DISEASE.—Dr. B. W. Richardson, who, in the *Brit. and For. Medico-Chirurg. Rev.*, in 1863, first called attention to the poisonous influence of the pure bichromate of potassa upon abraded surfaces, has read a second paper upon the same subject before the Medical Society of London, in which he described how, in the manufactnre of the bichromate from the neutral salt, the atmosphere becomes filled with minute particles of the bichromate. Consequently workmen who do not pay strict attention to personal cleanliness, are very soon attacked by a violent prickling and burning sensation in the nose, and to a less extent in the mouth. Gradually the mucous membrane becomes eroded until the septum nasi may be entirely destroyed. A curious fact is mentioned in this connection, viz.: those addicted to the habit of "snuff-taking" are free from such poisonous influence, owing, no doubt, to the fact that snuff covers the mucous membrane, and to the frequent use of a handkerchief. Other parts of the body, such as the penis, are often the seat of this ulceration, because lightly covered or frequently handled. Horses employed at the works also suffer, and he mentions one instance where the hoofs came off and the animal died a month after the commencement of the disease. Both sexes alike are prone to infection. M. Clouet has found that those who have lost the septum of the nose in this manner never suffer from nasal catarrh. Treatment resolves itself into that of prevention by cleanliness, use of rubber gloves, etc. The subacetate of lead has been resorted to with favorable results.—*Lancet*, March 11, 1882.

Progress of Medical Science.

MINUTE ORGANISMS AND PASTEUR'S GERM THEORIES.—*Apropos* of a paper read by M. Pasteur's *préparateur*, M. Chamberland, at the École Normale, Dr. De Bellesme takes occasion (*Prog. Medical*, April 8th) to state such views as have at one time or another been brought forward against the vegetable germ theories by those who either maintain the possibility of equivocal generation or the admissibility of a physico-chemical theory. He urges that it is important, from a medical point of view, to consider the full weight of these theories upon minds that have not the requisite logical training to appreciate them. The *microbe* dogma is, of course, he says, nothing that is new, but merely a revival of tenets that were current in the middle ages, and have been at various times reproduced, only to be overturned by suitable inquiries. What, he asks, are these microbes that Pasteur talks about so glibly? He at first thought they were infusoria, while his assistant calls them eels (*aiguilles*), and yet they are claimed by Pasteur to constitute the infectious element of all contagious maladies, and to be synonymous with what pathologists call virus. Unfortunately, however, he does not see them so easily with the microscope; for, if we adhere simply and purely to facts, there is not now, he says, a single virulent disease of the human kind, in which we have proved the presence of organisms that determine the disease, and yet our appliances for micrographic study are so perfect that it appears doubtful if they can be much improved upon. It is not sufficient for the adherents of this theory to state that, if no destructive *germs* are found in cholera, variola, or syphilis, it is no proof that they do not exist, for if they make the statements above referred to they are bound to offer satisfactory proof that such do exist. Unfortunately for medical science, he adds, Pasteur and Chamberland are not physicians, and one side of the case, that of the patient, they cannot appreciate. Upon an individual who exists under such an ever-changing variety of conditions, studies can only be successfully prosecuted by one who is both physician and pathologist. But, after all, he says, what scientific accuracy can there be in dividing *microbes* into mobile and immobile? With as much sense might the human species be divided into those who sit down and those who stand up, for there is nothing more gained by it. Indeed, statements such as this, that microscopic organisms do not occur in spring water or in normal animal or vegetable tissues, (Pasteur) are simply erroneous, as it is a well-known fact that they are found everywhere. Indeed, the epithelium of certain cavities, such as that of the mouth, contain almost the entire collection of these *microbes*. Would any one have the courage to deny that the mucous membrane is at times ruptured, so that the avenue is open for these organisms to enter the blood-vessels. Why, therefore, are we not at times infected with our own organisms?

TREPHINING FOR EPILEPSY.—*The Boston Medical and Surgical Journal*, April 20, 1882, contains the report of two cases of trephining for epilepsy, in the service of Dr. G. W. Gay, Boston City Hospital. In both, the epileptic seizures followed and appeared to be dependent on injuries to the head. In one the operation was unsuccessful, the patient leaving the hospital in much the same condition as on entering.

The other appears to have been successful, reports covering a period of over six months subsequent to the operation indicating that the patient was perfectly well. In this instance a careful examination of the skull revealed only a slight flattening of the vertex but no depression. The patient localized his disagreeable sensations and tenderness at a point exactly in the middle of the vertex and this was the point operated upon, full Listerian precautions being followed out during the operation and subsequent dressings. The next day he appeared and said he felt better than before the operation. Subsequent to the surgical procedure he remained free from pain, slept well and seemed bright and happy; previously he had complained of severe pain, was extremely delirious, and at times almost insane. These cases are interesting as corroborative of those published by Dr. W. A. Hammond ("Treatise on the Diseases of the Nervous System," 1876), who states that in cases of epilepsy following injuries to the skull, trephining is of great service. Of twenty-three operations by him, in seven there was a cessation of the attacks; in two of the seven there was neither fracture nor depression. Of the remaining sixteen cases, cranial injury was absent in three; and in the thirteen with such injury the operation, while unsuccessful, was usually beneficial in lessening the frequency of the seizures. Dr. H. inclines to the view of Dr. Lente, that epilepsy may result from a cicatrix of the scalp. As a summary of his experience, he expresses himself strongly in favor of trephining, or excision of the cicatrix in all cases of epilepsy where the skull or scalp are injured.

"Back-sling" for Fractured Clavicle.—Dr. Lorenzo Hale, of Albany, N. Y., has proposed a new method of treating a fractured clavicle. Though recognizing Dr. Moore's (Rochester, N. Y.) principle in its treatment, he claims an improvement upon the method in that he substitutes a back-sling for Dr. Moore's shawl-bandage, which he considers "cumbersome and warm," concealing the fracture from inspection, and at times, exerting an undue pressure on the depressed fragment. The "back-sling," for such he calls his apparatus, is applied by passing a common roller-bandage (better webbing), commencing at the scapula of the sound side below the forearm of the affected side (with the elbow drawn backward), then upward over the forearm, across the back, axilla, and shoulder of the sound side, to the end held against the scapula. A second bandage in front, from the wrist to the sling-bandage on the sound shoulder, completes the application and tends to steady the arm. A compress, held in place by means of adhesive plaster, may be utilized at the seat of fracture if needed. By this method he maintains that the principle in treatment of such fractures, viz., an upward, backward, and outward support for the shoulder, is accomplished by the coolest, most effectual, and most comfortable means yet offered. His article ends with a brief history of a few cases thus treated, when, after removal of the bandage, the seat of the fracture could not with certainty be detected.—*Medical Annals*, March, 1882.

Stammering.—Prof. Geo. Delon, of Paris, France, has read an interesting paper on this subject before the Academy of Medicine in Cincinnati, Ohio. He ascribes the defect to causes that may be organic or hereditary, though sometimes it may be due to contagion, for which reason nervous children should be kept as far as possible from associating with those that stammer. In those affected with this defect the formation of the vocal organs often presents some abnormality; they lack strength and suppleness. The difficulty sometimes resides in the tongue, which may be too long or too short, too thick or too thin, and so other portions of the vocal apparatus may deviate from the normal. The respiratory organs are also often found in poor condition, and not working regularly. Prof. Delon lays great stress on the nervous element in this affection. The timidity of all stammerers is a feature of their difficulty which is very hard to combat, and at the same time it is essential in the cure of any case to overcome it. He affirms his belief that all cases, where the organs have not been mutilated or paralyzed, are capable of cure. He does not believe in the possibility of self-treatment, but considers the intelligent and enlightened guidance of an instructor indispensable. In his method Prof. Delon aims to remove the organic trouble, by regulating the respiration, and strengthening and rendering supple the organs of speech—repeated and rational exercise. The next step in this procedure is to teach the pupil, by careful training, how to so use the vocal organs as to keep them under his control. The patient must be taught to be calm and deliberate. This requires special study of each case, and patient, steady perseverance on the part of both patient and physician.—*Cincinnati Lancet and Clinic*, April 15, 1882.

Various Nervous States Determined by Hypnotization in Hysterical Patients.—Hypnotism, says M. Charcot, considered in the light of perfect development, such as is often manifested in women with hystero-epilepsy *à crises mixtes*, comprehends several nervous states, each of which is distinguished by special symptoms. There are three such conditions: (1), the cataleptic; (2), the lethargic; (3), the somnambulic. Each one of them may occur simple and alone; but even in the same subject and during the same examination they may succeed each other, according to the will of the observer or operator.

The cataleptic state may manifest itself under the influence of an intense noise, a light placed in full view, or in consequence of gazing intently for a long time on any object whatever. The lethargic state may then immediately ensue if the eyes, having been closed, are exposed by raising of the lids. The cataleptic subject holds the eyes open and has a rigid look; he is motionless and as if petrified. The limbs remain for a long time in the position in which they have been placed. In moving them they seem to be very light, and the articulations appear to offer no resistance. Tendon reflexes are either abolished or much enfeebled; the phenomenon of neuro-muscular hyper-excitability is completely annulled. Pneumographic tracings show that there are long intermissions between the respirations. But the frequent persistence of sensorial activity often admits of the cataleptic being acted upon and induced to produce various automatic acts. The lethargic state is developed in the cataleptic when the eyes are closed or the subject is put in a dark place. It can be produced under the influence of the eye. While the eyelids are closed the balls are in convulsive motion, the muscles are relaxed, the limbs flaccid. The respiratory movements, studied by aid of the pneumograph, are deep but regular. Tendon reflexes are remarkably exalted. In all these cases there is what M. Charcot proposes to call neuro-muscular hyper-excitability, and which consists in the aptitude certain muscles exhibit in entering into contraction under the influence of a mechanical ex-

citant applied to the tendon, the muscle, or nerve supplying it. In the lethargic state all efforts to arouse the subject by actions tending to produce fear have usually no effect.

The somnambulic state can be determined by the fixed eye of the observer or by slight sensorial excitations. It can be produced either in the cataleptics or in the lethargics by gently rubbing the top of the head. In this state the individual has his eyes wholly or partly closed. Tendon reflexes are normal. No neuro-muscular hyper-excitability. Slight pressure on the eyeballs will now cause the lethargic state to supervene.—*Journal de Med.*, April, 1882.

Gun-shot Wound with Extensive Injury to the First Lumbar Verterra—Recovery.—The following case, reported by a surgeon whose name has not yet been made public, is interesting in so far as it bears upon the matter of surgical injuries to vertebræ and the possibility of cure resulting after an operation. M. H. Francis, Captain Company F, Eleventh Regiment Virginia Infantry, was wounded May 31, 1865, in the right hip. Almost at the same instant he received a second bullet in his right leg, which brought him to the ground. While lying in the mud he was struck by three other balls, one in the back, another in the wrist, and a third in the thigh. For twelve hours he lay upon the battle-field before removal to the hospital. After a month's treatment he left for home, over a long, rough road, on a leave of absence. Six months afterward he returned to the army, and entered upon unusually active duty, though suffering great pain from time to time in his back. When the war closed he engaged in active farm-life, and up to the summer of 1874 he enjoyed fairly good health, when, in building a mill-dam, where he was much of the time standing in water, lifting heavy logs, he became ill. Our interest is centred upon the course taken and the effects resulting from the wound in the back. An examination on February 12, 1875, revealed a man of large frame weighing less than one hundred pounds, with his body drawn to right side, his thigh flexed upon his abdomen, and his leg upon his thigh; little fever, no appetite, and strength rapidly failing. A small pouting wound, four inches to the right of the spine and just below the twelfth rib, was discharging yellowish pus. A silver probe was passed inward and slightly upward until it encountered a hard substance at a depth of four and a half inches; neither dead bone nor lead, as proved by the "feel" and Nélaton's porcelain probe. As there was no evidence of injury to any vital organ, an operation was deemed advisable. The patient was chloroformed, and an incision four inches long was made in the long axis of the body, and a careful dissection, guided by the track of the bullet, down to the first lumbar vertebra in the body of which the ball could be distinctly felt with the index finger. Two unsuccessful attempts to remove it were made, but each time the instrument slipped. The third trial was successful. Examination of the wound by the finger disclosed a smooth surface of dead bone, which was left to the efforts of nature, as further operation was considered dangerous. Improvement followed, but three months later the patient became feverish and suffered great pain from the formation of an abscess in the side at a point corresponding to the site of the incision in the right side. Upon being opened, it discharged a large quantity of dark-colored pus and a few fragments of bone. Later, a piece of cloth, two inches long and one-eighth of an inch wide, together with a cup-shaped piece of dead bone, exactly fitting to the apex of the bullet, came away from the opening in the right side. In August, 1881, both wounds had closed entirely; the patient was up and about his work, strong and robust. Such a result, after so great an injury to the body of a vertebra, would not uphold Dr. Sims' assertion, made in reference to the case of President Garfield, "that with it (the injury to the vertebra) it was impossible for him to live."—*Gaillard's Medical Journal*, March, 1882.

The Hypodermic Use of Woorara in Tetanus.—Impelled by the incompleteness of our knowledge regarding the effects of woorara upon man, and concerning the limits within which it may be safely utilized, therapeutically, Dr. Leslie Maturin publishes (in the *Dublin Journal of Medical Science*, April, 1882), a case of tetanus treated with subcutaneous injections of that drug. A short *résumé* of its natural history precedes the record of the case. Woorara, also known as urari, curare, wurali, and wourari, is presumed to be a combination of vegetable principles, the poisonous ingredient of which is, chiefly, the juice of the strychnos vine. It is prepared for use by mixing it with pepper, coque-du-levant (cocculus toxiferus) and other acrid plants. Taken internally, urari has no toxical effects. It was first therapeutically employed by M. Vella, in 1856. It paralyzes only the motor-nerves, leaving sensation unimpaired. Dr. Maturin administered the woorara hypodermically, in doses of from three-twentieths to one grain. The spasms continued for thirteen days, but the patient recovered. The conclusions reached by Dr. Maturin, after careful study of the case, are as follows: Woorara seems to exercise a specific action in diminishing the frequency and violence of the tetanic spasms. Its acinetic properties are not always *immediately* developed upon its absorption, being more marked by a comparison of its daily effects than by that of shorter intervals; it has not a cumulative effect; four grains may, in the adult, be exhibited at intervals during the twenty-four hours without danger to life.

The Bacillus Lepræ: Is it a Reality or a Fiction?—Under this interrogative title, Dr. H. D. Schmidt, Pathologist of the Charity Hospital of New Orleans, La., discusses the relations of parasitic organisms to leprosy in the *Chicago Medical Journal and Examiner*, for April, 1882. His deductions are based upon a critical examination of numerous specimens taken from the tissues of three fatal cases of leprosy observed by himself, in 1880, and stained with methyl violet. Dr. Schmidt failed to find the so-called *bacillus lepræ*, the etiological relations of which to the disease in question have been generally admitted since the publication of Hausen's observations in 1870, and entertains serious doubts as to its presence in leprous tissues. Having retained numerous sections of these tissues, taken from his cases and preserved in alcohol and water, Dr. Schmidt offers to furnish competent pathologists with specimens in order that they may examine and report upon them. Dr. Schmidt's paper closes with a certificate, signed by Drs. Curtis, Hyde, and Fenger, of Chicago, to the effect that the subscribers failed to find any bacilli in the specimens prepared and exhibited to them by Dr. Schmidt.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, May 27, 1882.

THE AMERICAN MEDICAL ASSOCIATION AND THE NEW YORK CODE.

At the next meeting of the American Medical Association the question of freedom in consultations, as advocated by the New York Code, will doubtless provoke considerable discussion. It must, necessarily, be brought up in connection with the right of representation in the Convention of the New York delegates. Whatever decision is arrived at, it is to be hoped that it will be the result of a calm consideration of all the pros and cons in the matter. The association can hardly afford to take any hasty action in the premises or render a snap judgment on the main points at issue. The subject is one which will bear the most thorough examination, and in justice to the Medical Society of the State of New York, it should receive such at the hands of the judicial council. The position of the New York men has not been generally understood.

The opponents of the new Code make a mistake in supposing that instrument to be in any manner an apology for homœopathy, eclecticism, or any other form of error. Its advocates are firm in the faith of the so-called "old school." They are as jealous of the fair fame of the profession as their critics, and have done, to say the least, as much as they to advance its true glory. The ignoble charge that they are actuated by mercenary motives and hanker after the pecuniary benefit which consultations with "irregulars" would bring, is too childish and flimsy to need refutation. So far as we know them, and we think our opportunities for knowledge are certainly as ample as those of outsiders, they are men of the highest probity and all in a position to be free from such mean and grovelling propensities. To allege that the Code is in the interest of the specialists, and that they desire to have license in the matter of consultations and to be afforded scope to violate even the restraints of common professional decency, is absolutely groundless. The specialists among us have been made such by the action of their professional brethren. They have not arbitrarily assumed the position. They are, with scarcely an exception, men of broad medical culture, possessing the attributes of honorable professional workers, and their special knowledge or skill in addition. They have always been loyal to the American Code, and, if properly understood, are still so. They have been foremost in everything relating to the honor and advancement of the profession, and show a proper public spirit in everything that has affected the progress and dignity of their calling.

Their influence in developing hospitals and in adding to the solid attractions of our medical schools has conferred a great benefit upon the cause of humanity. To subject them to unjust criticism is ignominious. Three out of five of the committee which reported the new code were family practitioners, and the relations of specialism were not for a moment considered by the remainder, or by the large majority of the State Society which voted for the measure. The New York Code has done nothing more than confer upon each man the privilege of thinking for himself, and acting according to his own conviction of right. He is constituted his own judge as to the propriety of holding consultations with any other legally qualified practitioner whatsoever, or of refusing to do the same.

On the principle that there is only one broad platform upon which all progressive men can meet, one platform in which they can be placed upon the simple level of seekers after truth—simple doctors, nothing more and nothing less—the New York Code has given the freest liberty of thought to the individual. There is no more danger of consulting with homœopaths, or with irregulars generally, than heretofore; nor will there be, no matter what liberal construction may be placed upon the spirit or intent of the new clause. Each man has his honor and conscience in his own keeping, and he will doubtless act accordingly. The responsibility of doing properly in any given case is thrown upon the individual rather than upon conventional rules.

There does not seem to be any harm in allowing every man to govern his action according to his conscience. This question has nothing directly or indirectly to do with the recognition of homœopathy or any other irregular practice. No member of the Medical Society of the State of New York can consistently meet a professed homœopathist or an avowed eclectic. As a disciple of a liberal science he cannot countenance dogmatism in any shape. Nor will he, if he is true to himself or his principles. The very fact of consultation implies the existence

of confidence in each other's judgment and the freedom from sectarian influences. Liberality and dogmatism are always opposed to each other, and are no more apt to agree at the bedside of the dying patient than they are at the stake of the martyr. A careful study of the New York code will lead to the conclusion that its provisions concerning consultations do not really present any inconsistencies with similar provisions in the American code. We are forbidden by it to consult with irregulars and such as are wedded to any exclusive dogma "to the rejection of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." Practically, this has no meaning, and in the absence of any direct explanation leaves each man to judge of its application.

It is beyond the memory of man when any regularly educated and competent medical man, a member of the American Medical Association or any other medical body in affiliation therewith, has been disciplined under this rule. And this is simply for the reason that it has been impossible to do so. So far as consultation with the dogmatists, as described by the American code, is concerned, the New York medical man has been and always will be as free from temptation and as safe from the commission of sin as any of the gentlemen who may present condemnatory resolutions at the St. Paul meeting.

We speak advisedly when we say that the Medical Society of the State of New York in its recent action had no direct intention of placing itself in avowed antagonism to any code calculated to elevate and advance the regular profession, but believed that it was taking a step forward by granting liberty of opinion to its members, in terms not to be misunderstood. If the American Medical Association denies this right to any body of honorable, thinking, competent men, it is simply wrong, and the members of the State Society can afford to be on the other side. In any event we are quite satisfied that the adoption of the new code will be fatal to irregular practice in this State. It will stimulate every friend of medical education and every legally qualified practitioner to new endeavor to advance the standards or tests of professional scholarship. It will awaken them to the defence of scientific medicine against all attempts by quacks to secure the sanctions of law. It will lead to amendments in our present laws for the better protection of the public against badly equipped medical schools, and against general charlatanry. It will make our State too hot for medical outlaws, and the good influence thus adduced will go out into all parts of the country with which we have scientific, commercial, and social relations. It is in the interests of liberty and not license, and instead of being a concession to homœopathy it will be its death-blow.

THE ANTIPHLOGISTIC ACTION OF LOCAL BLOOD-LETTING.

The usefulness of local blood-letting in relieving acute inflammation is a well-established fact, and one of which advantage is hardly taken so often as it should be. A very ingenious demonstration of the way in which such blood-letting acts upon local inflammation has recently been made by Genzmer (*Centralblatt für die Med. Wissensch.*). A description of it may be of interest, and furnish also some stimulus to a more extended and rational application of this measure.

The old view that local blood-letting acted by producing a local anæmia has been for some time set aside as inadequate. The present view that this procedure starts up the blood-current again and relieves the inflammatory stasis is the one illustrated by Genzmer's experiments.

He took a number of frogs, curarized them, and made local points of injury in the web of the foot with a red hot needle. These injured points were then watched under the microscope. So soon as the classical symptoms of inflammation—dilatation of vessels, wandering of white blood-cells, slowing of circulation, and finally stasis—set in, a vein near the joint of the leg was opened. A fine glass tube was inserted and blood slowly sucked out. As soon as the blood began to flow, the condition of things at the inflammatory focus changed. The corpuscles moved again, very soon the stasis disappeared, and the blood flowed continuously through the part. The inflammation was stopped, temporarily at least.

In other experiments, scarification or general blood-letting, was employed instead of local blood-letting but not with so good results.

The inference from the above description is that blood-letting acts antiphlogistically, in a purely mechanical manner. This is very satisfactory, except that it appears to be almost too clear and simple to be in accord with Nature's usually mystic methods.

OUR CHRONIC PAUPER INSANE.

This hapless and uninteresting class has recently received official attention.

According to a State law, sixteen of our New York counties are allowed to keep their pauper insane instead of sending them to the Willard Asylum. The insane in these counties number 1,286. With one exception the above counties keep them in buildings connected with the poor-houses, and under the same executive management.

The condition of these insane some years ago was horrible in the extreme. There is still a great need of improvement, as has been shown by Messrs. Letchworth and Carpenter, of the State Board of Charities.

These gentlemen, as a special committee, visited and carefully examined all the county institutions. The defects which they found were very numerous.

For example, in the sixteen institutions visited was kept the following array of restraining apparatus: 39 cribs, 30 restraining chairs, 48 muffs, 43 camisoles, 30 hand-cuffs and shackles, 46 wristlet-bands and waist-belts. The number of restrained at the time of visiting was not large, however, being only thirty-four, besides a number who were locked in rooms. The committee refer, however, and justly, to the temptation to misuse to which so liberal a supply of apparatus must lead.

A long list of suggestions for improvements in the matter of general care, occupation, diet, amusement, etc., is given. The report, in brief, shows that our county insane are scattered about in too small groups for humane or economic treatment. The county almshouses are political centres, and the insane are hindered in a hundred ways from getting proper supervision and treatment.

All this has been known before, but the report just made tabulates the facts again, and in an impressive manner.

The remedy suggested is that of massing the chronic pauper insane of the counties together into district asylums. No county should be allowed to care for its insane alone, unless it has over 250. If the number is less, two or more counties should unite. These district asylums should be regularly organized, with a medical superintendent, and, if possible, a non-political board of trustees.

This suggestion, made by the committee, is essentially the same as that proposed in the RECORD three years ago. If not the best possible way of solving the question, it is vastly in advance of the present method.

The report which we have thus commented upon is an unusually careful and judicious one. We may perhaps be allowed to wonder why our esteemed State Commissioner in Lunacy, Dr. Ordronaux, has never, in his yearly peregrinations, brought out these same facts.

It is not likely that any action will be taken upon the matter this year, although a bill has been introduced; but the matter should not be allowed to rest. The profession owes it to itself not to let the sick either in mind or body be made the victims of our political machinery, which means inhumanity and neglect.

AN AGRICULTURAL DEPARTMENT.

THE House of Representatives has passed by a very large vote the bill to create an agricultural department. The prospect now is that the bill will become a law. The establishment of such a department means an enlargement of the work of the present Bureau, and to some branches of this the medical profession can look with considerable interest. It is proposed to divide the new establishment into three bureaus. The first is to be the Bureau of Agricultural Products, and will include botany, chemistry, and entomology. This allows of a large amount of scientific work. The second is the Bureau of Animal Industry, and is the one which will especially claim medical attention. It is to be under the charge of a veterinary surgeon, and its duties include a supervision of the domestic animals, with investigations regarding their number, condition, and the diseases to which they are subject. Means are to be provided for protecting them against contagious diseases, and investigations are to be carried on as to the best methods of feeding, breeding, and improving stock.

The third bureau is that of Lands and Statistics.

It will be seen that our Government is now likely to create a department which will be very largely scientific in its work, and that some of this work will doubtless help forward the science of comparative pathology, in which there is now a growing interest. It will also be a satisfaction to know that the status of scientific work can be elevated and its opportunities enlarged by the creation of this new department.

A TRIBUTE TO AMERICAN SURGERY.

THE American surgeon, though apt to be deficient in scientific training, is generally acknowledged to be quite equal to his European confrères in practical knowledge, ingenuity, and operative skill. For all that, surgery in this country has not yet reached the stage where an acknowledgment from abroad of our achievements is not gratifying.

Such acknowledgments, as in the case of Bigelow's operation, are often slowly, if not grudgingly given. We have recently noted, however, a very generous and candid review, in the *Medical Times and Gazette*, of what our distinguished townsman Dr. Sayre has done in calling the attention of European surgeons to the plaster-jacket treatment of spinal caries. It is stated that before Sayre went to Europe, and in accents not entirely silver-tongued, explained the American method, very little was being done for cases of Pott's disease. Such attempts as had already been made to use plaster-splints had been largely abortive, through misapprehension or lack of skill. At present, however, the fixing of the trunk in some kind of a jacket is universally admitted by European surgeons to be helpful, and very often curative. There has thus been a new era created in this branch of surgery, and an inestimable boon conferred upon a large class of sufferers.

There would naturally be some question of priority with regard to so important a contribution to surgical therapeutics as the plaster-jacket. There can be no doubt, however, that the English reviewer justly gave Dr. Sayre the credit for championing this method, explaining its principles, and successfully placing it before the profession.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 18, 1882.

Dr. Fordyce Barker, M.D., LL.D., President, in the Chair.

The Statistical Secretary, Dr. F. V. White, formally announced the

DEATH OF JAMES R. WOOD, M.D., LL.D.

Dr. Lewis A. Sayre offered resolutions prepared by Dr. Wm. H. Van Buren, which were followed by expressions of profound sorrow and tributes of highest respect from Drs. Sayre, Willard Parker, Wm. Detmold, and the President. The resolutions were unanimously adopted, ordered engrossed, to be sent to the family of the deceased, and a copy to be transmitted to the medical journals of this city.

The President appointed Dr. Frederick S. Dennis memorialist.

Dr. Henry J. Bigelow, of Boston, was then introduced to the Academy and spoke on the subject of

LITHOTRITY WITH EVACUATION.

His remarks were illustrated with instruments and consisted of a historical sketch of the successive steps taken in bringing the operation to its present degree of perfection, together with occasional practical hints concerning its application. The subject, he said, was a purely surgical one, and something even more limited than that; it was almost purely mechanical. The pure mechanics of the subject were the branch which had modified lithotrity and made the operation what it is, and to that especially he directed the attention of the Academy. The subject deals with physics more generally than almost any other subject in surgery. The instrument which has changed the views of surgeons with regard to the bladder is expected to deal with air, water, and solid material.

Any of the old instruments will break a stone, but it becomes a matter of interest as to what one will do it best. In 1878, in a discussion in London, Sir James Paget said he thought the subject had been so thoroughly studied that it was very doubtful if further improvement in the operation would be made. But, curiously enough, the instruments for lithotrity have undergone considerable modification since that date and, although the old ones will do the work, those which we now have will do it much better, and it is still desirable to improve upon the instruments in ordinary use.

About six years ago it was the general practice to perform the operation of breaking, in from two to seven minutes. Some operators in Europe inculcated the view that from two to three minutes was the best average time, although the operation was occasionally protracted to five or six minutes. When Civiale began to practise it, he occupied sometimes half an hour, but it was said that he soon reduced the length of the sitting and gradually brought it down to three or four minutes. Passing to the consideration of instruments, Dr. Bigelow exhibited Clover's, and directed attention to the fact that the small catheter used (21, French) was really the part that retarded the progress of the operation. If stones could be reduced to powder they could be removed readily through a small tube. The only distinctly important thing in the instrument with which the best results had been obtained, differing from Clover's, was the *large* catheter, and the range now employed was from 25 to 31, the last being used in only very exceptional cases. With reference to straight or curved, he preferred the straight catheter. As a rule, he thought he could introduce it better than the curved catheter. However, it was a matter of individual preference, and really was a question of considerable importance.

Dr. Bigelow then illustrated upon the blackboard the modifications which had been made in the vesical extremity of the catheter, and said that a large incline was likely to wedge the fragments, and the orifice should not be longer than the diameter of the tube.

With reference to the bulb, a variety of modifications had been made, and the questions in physics involved in their construction, and the obstacles to be overcome, were stated and demonstrated upon the board.

With refereuce to the fragments, it was a matter of fact that they are returned from the bulb to the bladder, and to prevent this he had devised a trap at the head of the catheter. At first he used a rubber ball, afterward attached a bit of cloth to the end of the tube, both of which worked well, yet sometimes were inefficient. A general principle applicable to this portion of the apparatus was that "in an evacuator *wherever water goes fragments will go, unless prevented by a strainer*, and that is the difficulty."

In his latest instrument there are two stopcocks, the tube enters the bulb in the axis of the catheter, delivers in the bulb in the centre, and the prolongation into the bulb—only to a distance which does not at all interfere with compression of the bulb—is a cylindrical strainer, *the aggregate space afforded by the holes being considerably in excess of that afforded by the central opening in the tube*, hence the water seeks the largest outlet and escapes while the fragments are arrested.

Dr. Bigelow exhibited Weiss's latest instrument, used by Thompson, but the objection was that the bulb was too limber and the fragments remained within it.

To get rid of air and graduate the quantity of water in bladders of different size, Dr. Bigelow attaches a hose to the top of the bulb, the other extremity of which is placed in a receptacle containing water, and he regarded it as a very important addition.

With his latest instrument every bubble of air could be expelled; with it the quantity of water in the bladder graduated easily and exactly at the will of the operator, and every particle of detritus could be quickly removed from the bladder.

With regard to *lithotrites*, the most convenient instrument was that which was best adapted to the most common motions of the hand. The rotary movements, he thought, were most easily and frequently made (pronation and supination), and therefore he had had the handle of his instrument made ovoidal in shape, with an arrangement by which the button of the older instruments was more readily managed. The blade of a lithotrite should be a near approach to a right angle: the nearer, the better it acts.

That instrument impacts least which has the male blade thickened so as to carry high teeth or notches which will crush the material off obliquely.

With reference to the introduction of the catheter, facility could be easily acquired by special attention to relations of the opening in the triangular ligament.

Concerning the size of the instrument, the object sought was to simply hold the urethra open to its normal calibre.

With regard to results, if the man is healthy, no accidents occur, and disease of the kidneys is not present, it is almost a question of the surgeon's skill whether or not he comes out of the operation safely.

The deaths which had come to his notice were these: 1, from septicæmia following laceration of the urethra by a fragment held in the eye of the tube; 2, from injury done by removing a loaded instrument that could not be emptied; 3, from removing a lithotrite without observing that it was half an inch open; and 4, from tilting the instrument after it had been introduced, and producing a false passage.

Dr. E. L. Keyes thought that Dr. Bigelow laid too much stress upon instruments, and too little upon the design of the operation. He had used the fenestrated instrument for the purpose of absolutely avoiding clogging. Whether the straight or curved tube was used was not a matter of much importance, although in old men the curved had seemed to him to work better than the straight.

There was no amount of sounding for stone like the use of a small tube, no air, and a good washer, and if the operation did nothing more, it was worthy of special consideration, and its usefulness as a searcher was sufficient to commend it for general adoption.

Dr. Gouley said that Dr. Bigelow had given the profession the best of all aspirators for the purpose of removing detritus from the bladder. As an interesting item in the history of removal of calculous detritus, he exhibited Mercier's original instrument, made twenty-five years ago. But with reference to aspiration he wished to say that while it was indicated in the cases of old men who cannot pass calculous detritus, and can be applied in these cases because the bladders of old men are much more tolerant of instruments and stones than those of middle-aged or younger men, it could not entirely supercede lithotomy in one or other of its varieties. Aspiration by thick-walled tubes caused violence which was greater than that produced by frequent introductions of the lithotrite, or even by fragments which are allowed to remain. The retention of angular fragments in the bladder did not do so much mischief as was generally supposed, for within six or eight hours they became coated with tenacious mucus, and thus their expulsion was rendered easier than if expelled quickly.

He was firmly convinced that aspiration should be restricted to those cases in which the bladder is not capable of expelling the detritus. Whenever the bladder can remove the detritus, it should be permitted to do so.

A good lithotriptist should be able to crush a stone with any of the old instruments, and should not hesitate to introduce it as many times as necessary. Civiale demonstrated in his first case the tolerance of the bladder, and it had been demonstrated many times since. There were cases in which it was preferable to have several short sittings of half a minute or a minute, rather than long ones of five, ten, or thirty minutes. Some cases complicated with renal disease could be successfully treated by short sittings.

If all stones were of the same character, surgeons could resort to one instrument and to one method, but their differences in position, size, density, etc., render different methods of operation a necessity. He did not think that the method by aspiration would be generalized any more than any of the other operations. There will always be cases which will indicate rapid lithotrity, and others that will equally indicate some one of the cutting operations.

Dr. Otis was decidedly in favor of this operation in the great majority of cases. Much had been said concerning the tolerance of the bladder, and it had been demonstrated so thoroughly that nothing need be added. But the urethra seemed to have been forgotten. Dr. Otis thought that the injury to the urethra was the dangerous part of the operation. All the deaths in the operation mentioned by Dr. Bigelow had come from damage done to the urethra. He believed it would be found necessary, in order to make the operation as safe as possible, to prepare the urethra for it by making the meatus correspond in size with the calibre of the canal behind, and remove any obstruction which might exist along the course of the canal.

Dr. Willard Parker believed there were certain cases in which the cutting operation would still be necessary and best, but the advances made by Dr. Bigelow in the method demonstrated were worthy of the highest commendation. Again, any man who made one séance answer the whole purpose was a benefactor to his race. Complimentary remarks were made by Drs. Sands, Sayre, and Detmold.

Dr. Bigelow exhibited the detritus of the largest stone he had removed. The man was sixty years of age, and the material removed weighed 1,380 grains. The operation occupied about one hour, and the patient did not have a bad symptom afterward.

On motion by Dr. F. H. Hamilton, the thanks of the Academy were given to Dr. Bigelow for his valuable and instructive demonstration.

The Academy then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, March 14, 1882.

Dr. T. M. Markoe, President, in the Chair.

Dr. A. C. Post presented a patient, illustrating the benefit arising from the use of

THE ACTUAL CAUTERY IN CERTAIN INFLAMMATORY AFFECTIONS, ATTENDED WITH GREAT SWELLING AND INDURATION OF THE CELLULAR TISSUE.

The patient was a woman, who presented herself about two weeks ago, having suffered a number of months before from extensive burns. The right forearm and hand, parts involved in the burns, recently became inflamed, the parts were swollen and red, and both the skin and the cellular tissue became indurated. The condition had existed about a week, when Dr. Post anæsthetized the patient, and inserted a small Paquelin cautery through the skin into the cellular tissue at thirty-nine points, with a distance of two or three centimetres apart. The parts were dressed with a saturated solution of bicarbonate of soda, and the patient had not suffered any pain whatever. The cautery was applied twelve days ago, and there had been a rapid subsidence of the swelling. There had been a slight discharge from the punctures.

TRIGEMINAL NEURALGIA.

Dr. F. Lange presented a patient who had submitted to many operations and a great variety of internal treatment for the relief of neuralgia of the *second* branch of the trigeminus. He was a man fifty-eight years of age, and had suffered severely from the disease since May, 1875, the first symptoms appearing some years before. No cause could be assigned. There was no history of malaria, syphilis, or rheumatism, and he had always been healthy. For four years he received internal and other treatment, but without obtaining permanent relief. In 1879, Dr. Guleke divided the infra-orbital nerve, and relief was secured for a few weeks; but the pain returned, and the patient went to Vienna, where Billroth, according to the patient's statement, resected the infra-orbital nerve, in May, 1879, to the extent of three-fourths of an inch. Transient relief was afforded, but in June the pain returned, and then an operation was performed, consisting of a removal of a portion of the upper jaw, and the result was relief from pain for about one month. The pain then recurred, and the common carotid artery was ligated, but without benefit. In September, Dr. Mikulicz, Billroth's assistant, removed still more of the upper jaw, and resected the nerve to its exit from the cranium. After two months the pain again returned, and ceased with the application of electricity. From that time to May, 1881, he had no pain, and then it returned chiefly in the area of distribution of the second branch, but also affecting the inferior maxillary, and somewhat the lingual branches. In August, 1881, Dr. Lange removed a sequestrum from the zygomatic bone, but without benefit, and on the 12th of January, 1882, he performed an operation, which consisted in stretching and dividing the inferior maxillary nerve, stretching the lingual, and also the facial. The hemorrhage was slight. Recovery took place without complication. There was some suppuration at the angle of the lower jaw. For about three days, several paroxysms of pain occurred, but none since that time. Whether the benefit was to be permanent or not, of course could not yet be determined.

The operation, as recommended by Zonnenburg, consists in making an incision around the angle of the jaw down to the bone, and then at the inner side of the jaw the internal pterygoid muscle is separated from the bone, the entrance to the infra-maxillary canal exposed, and the nerve easily found when the head is hung from the table after Rose's method. Dr. Lange, however, found the operation in his case to be a tedious and difficult one—(1), because the stiffness of the spine would not permit the head to hang over the table easily, so that, altogether, Rose's position could not be made use of; and (2), the lower jaw was so well developed that the distance from the external incision to the nerve was very great. He attempted to illuminate the bottom of the wound by means of a forehead-reflector, but was unable to see the nerve. He was able to feel it with the finger, and having ascertained its situation, he passed in a hook and caught and pulled it forward (then by means of the reflector it could be recognized), stretched and divided it.

The facial nerve was found just at its exit from the stylo-mastoid foramen, at the upper edge of the digastric muscle. The edge of the parotid gland had to be lifted and pulled aside, and the sterno-mastoid muscle had to be cut across partially to allow easy access to the nerve.

Complete paralysis of the nerve existed for several weeks. The eye could only be closed by means of the finger. Some of the lower branches, to be sure, had been cut already at previous operations. At present there is a slight action of the orbicularis muscle.

The lingual nerve was found and stretched, and also the infra-maxillary nerve. The tongue presents now its normal sensibility. In the beginning the latter was impaired.

Dr. J. W. Howe referred to a patient seen at St. Francis Hospital, who had suffered from infra-orbital neuralgia for fifteen years. A variety of means were employed for his relief, but no benefit was afforded until he received *hypodermic injections of strychnia*. Four injections, one-sixtieth of a grain each, were given in the region of the nerve, and after the second one the neuralgia began to diminish very much in severity. On account of the local inflammation, caused by the hypodermic injections, they were given in the back and continued for about three weeks, when the pain had entirely ceased. The patient remained well two or three weeks longer, and was then discharged from the hospital free from pain.

Dr. T. T. Sabine then read a paper on

PLASTIC OPERATIONS FOR LOSS OF THE NOSE.

Dr. C. T. Poore reported a case of

RUPTURE OF THE QUADRICEPS EXTENSOR TENDON,

as follows: A gentleman, between sixty and seventy years of age, in the early part of November, 1881, made a false step while descending some stairs, and ruptured the quadriceps extensor tendon from its attachment to the upper border of the patella. Dr. Poore saw the patient two and one-half hours after the accident, and on examination found the lower end of the tendon three and one-half inches above the upper border of the patella. The case was treated very much like a fracture of the patella, and the patient made a good recovery. The ultimate amount of new tendon formed was two and one-half inches. The patient can now walk without any limp, can go up and down stairs, and has about three-fourths the normal flexion of that limb.

Dr. Keyes had had a similar case occurring in a gentleman, seventy-eight years of age, whose foot caught, causing him to fall. The patient had pain in the knee, with some swelling. The injury was supposed to be a sprain, and was treated for about a month with liniments without apparatus. There was, according to all accounts, some effusion into the joint. He did not get well, and was unable to extend or depend upon the leg. When Dr. Keyes first examined the knee a month after the injury had occurred, he found that the tendon of the quadriceps extensor had ruptured at the upper part of the patella, there was one and one-half inch separation, the lateral bands could be felt distinctly, and the lower end of the tendon was thickened. The patient could walk reasonably well by the aid of a crutch, but was unable to lift the leg; there was tenderness upon pressure over the knee, most marked at the thickened end of the ruptured tendon. The treatment consisted chiefly in giving local support, the patient wearing an elastic knee-cap, and the final result was that he walked perfectly well, without either crutch or cane, but was unable to raise himself with the injured limb on going up stairs. The separation and the lateral bands are still to be felt distinctly, but there is no longer any pain. Locomotion is perfect except for mounting stairs.

HARELIP.

Dr. Post presented photographs illustrating the result of an operation for harelip upon a child a few months old. The case was one in which the fissure was single, but complicated by an intermaxillar projection. He operated by making a semilunar incision upon each side without flaps. The operation was performed in December, 1881.

Dr. H. B. Sands presented specimens which illustrated the

DIFFICULTIES SOMETIMES ENCOUNTERED IN THE DIAGNOSIS OF CASES OF SUPPOSED INTESTINAL OBSTRUCTION.

The body from which they were removed was that of a man, sixty-nine years of age, of good constitution, whose health began to be impaired in July, 1881. At that time he noticed that the evacuations from his bowels were scanty and irregular and accompanied by some pain diffused over the abdomen. As time went on the patient, who was accustomed to dining out, noticed that he did not enjoy his meals as well as usual, and gradually he became an invalid, his chief symptoms being constipation, and the passage of fragmentary stools, the masses never being of normal size. Dr. Sands saw him for the first time, four days before his death, in consultation with Drs. Linsley and Flint. The patient had then been ill in bed about six days, with symptoms which denoted obstruction of the intestine. The abdomen during this period had become more swollen, not to a marked degree, but sufficiently so to prevent a satisfactory examination of the viscera; there was slight nausea, without vomiting or fever, and it was believed that a mechanical obstruction existed somewhere in the colon. Cathartics had been used without effect. Injections had also been given, but only about one quart of water could be thrown into the rectum. Dr. Sands was invited to see the patient with reference to the propriety of operative interference, and found the man without fever, pulse 90, with but little pain and occasional nausea, and upon inquiry ascertained that the obstruction was not complete, because flatus had occasionally passed and the injections had occasionally been found to contain small portions of fæces. The abdomen was so much distended that he was unable to make a satisfactory examination and, besides, the parietes contained a fair amount of fat. He felt inclined to agree with the opinion that the obstruction was due probably to cancer, and that the stricture was gradually narrowing the calibre of the intestine. He made a digital examination of the rectum, but without result. It was thought proper before resorting to a surgical operation to again use rectal injections, and Dr. Linsley administered them by means of a long tube which passed into the bowel to a distance of 12 inches without resistance, but only about a quart of water could be introduced.

Rather suddenly, in the night of the day preceding the patient's death, he began to sink; his pulse became rapid, his mind confused, and he died with symptoms of collapse.

At the autopsy, made twenty-four hours after death, the only stricture found was situated in the rectum *six* inches from the anus, and caused by a very moderate amount of interstitial deposit, reducing the calibre so as to allow only the little finger to pass through. Above that point there was no obstruction, and very little solid fecal matter.

On opening the abdominal cavity, it was first noticed that the peritoneum contained a large amount of fetid gas, which led to the suspicion that perforation of the intestine had occurred. The coils of the small intestine were bathed with pus and lymph, which not only invested the gut but formed a considerable collection in the pelvic cavity. The peritonitis was general. The coils of small intestine nearest the anterior abdominal wall were nearly black, and on proceding to remove them it was found that they were so soft that the ligature caused complete rupture of the coats, and was followed by an escape of fecal matter into the peritoneal cavity. The small intestine was gangrenous to the extent of three or four feet in the umbilical region, and in one part there were found two perforations, not more than one-fourth of an inch in diameter. It was the opinion of Dr. Prudden, who had examined the specimens, that one of these openings was made at the autopsy, and that that the other was probably the result of a pathological process.

Dr. Sands thought it highly probable that the perforation took place shortly before death, and resulted from a latent entero-peritonitis, which had escaped recognition during life.

The liver was studded with secondary cancerous masses.

The case was exceedingly instructive, as showing the difficulties attending diagnosis. The patient had a clear history of chronic obstruction, in which constipation, gradually failing health, and emaciation were the principal features. This diagnosis was supported by the occurrence of scanty fragmentary stools, and the refusal of the large intestine to receive more than a quart of injected fluid, and he was rather surprised, at the autopsy, to find that the chief symptoms during life must have proceeded from peritonitis, and not from the obstruction.

It was fortunate in this case, that no operation was attempted, because had the abdominal cavity been opened, with the view to performing enterotomy, the intestine would have been found so soft as not to allow the stitches to hold, and death would doubtless have been hastened by the laceration of its coats.

VESICAL CALCULI.

Dr. Lange presented specimens of vesical calculi removed, by the supra-pubic operation, from boys twelve and fifteen years of age respectively. Antiseptic precautions were used, the bladder was disinfected with a solution of boracic acid, the opening in the bladder was closed with catgut sutures, and the external incision left open, as a precautionary measure. A short rubber catheter was kept within the bladder for the first day.

In both cases, the wound in the bladder united by first intention, and the progress of the cases after the operation was without accident. In the patient twelve years of age, who had *two* stones, Dr. Lange used for raising the bladder a colpeurynter, introduced into the rectum, as suggested by Professor Braune of Leipzig, so that the part of the anterior wall of the bladder not covered with peritoneum is made to touch the abdominal wall to a greater extent, and also render removal of the stone easier.

He cut down upon the bladder with any instrument within the organ, then fixed the walls with tenaculi before making the incision through which the stones were removed.

Cicatrization in the external wound was not complete until four to five weeks after the operation.

The society then proceeded to the transaction of miscellaneous business.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, May 22, 1882.

Dr. F. R. Sturgis, President, in the Chair.

Dr. Wm. C. Jarvis read a paper (see p. 561) on

THE SURGICAL TREATMENT OF NASAL CATARRH.

The discussion was opened by Dr. L. Elsberg, who thought the statement that European laryngologists use the rhinoscope little or none should not go unchallenged. He did not know of any who would treat a case without using that instrument. The surgical treatment of nasal catarrh, however, he believed to be entirely of American origin. Certainly twenty years ago he began to scarify hypertrophied tissue in the nose, at the suggestion of the late Dr. Horace Green, who had practised it previous to that time, but finding that it gave rise to excessive bleeding in a large proportion of cases, he began to destroy the tissue by the application of strong acids. But he soon gave these up, and then began the mechanical removal of hypertrophied tissue, using first cutting forceps and then blunt scissors, and about a dozen years ago, employed for the first time a wire snare loaned to him by Sir Wm. Wilde, who had used it for what he supposed to be nasal polypus, but which was probably hypertrophied tissue resulting from chronic catarrh. He had, however, finally come to the use of evulsion almost entirely, the operation which Dr. Jarvis had disapproved of so unsparingly. When applied by a careful surgeon, with the parts well illuminated, the nostrils dilated, etc., he thought it was not so terrible as had been represented.

With regard to Jarvis' snare, it was as convenient and good a wire snare as any of which he knew, except perhaps Tobald's, which might be, possibly, a little easier managed.

With regard to transfixion needles, he had come to use instead thin-bladed forceps, and had succeeded better than when he used the needles. With reference to the tape-holder, it had not proved serviceable in his hands, and had been disadvantageous rather than advantageous. The subject is an important one, and he was glad that Dr. Jarvis had brought it before the profession.

Dr. Goodwillie thought there were certain facts concerning respiration which should not be lost sight of. A certain amount of moisture was necessary to keep the passages through the nose to the lungs in proper condition, and to secure that the muciparous glands should be removed to the least extent possible. The snare he regarded as a valuable instrument for removal of polypoid growths, but when the hypertrophy was only slight, he thought there was no operation so good as scarification done with the galvano-cautery knife. Hypertrophy of the posterior part of the nasal septum could also be treated in the same manner.

With regard to hypertrophy and deviation of the septum, he had not seen a case in which there was not more or less of bony deposit, and he thought the snare would not answer for the removal of a portion of tissue. In simple deviation with hypertrophy of the mucous membrane, the snare might answer a good purpose in some cases.

Dr. Bosworth had positive convictions that the surgical treatment of nasal catarrh was eminently proper. The tissue was of such a nature that it could not be reduced by local agents. He had used Jarvis' snare or écraseur, and with very great satisfaction, and he regarded the wire as entirely different from that which is used in Hilton's instrument. He regarded it as the best instrument now in use for such operations in the nasal cavity.

With regard to exostoses referred to by Dr. Goodwillie, he was disposed to differ with him concerning the frequency of their occurrence. For, in 10,099 cases seen in one year, he had found only two in which there was bony deposit, and in both of those the snare had been used successfully, and he believed that the tempered *steel* wire was capable of cutting through all such growths.

Dr. Brandeis had used the écraseur with some degree of success, and with more satisfaction later than when he first employed it. He had been successful in the use and adjustment of an annealed copper wire, by the aid of two fingers in the pharynx, an assistant securing it with the screw after it had been slipped over the growth. He thought that the transfixion needles exhibited by Dr. Jarvis were excellent, yet were open to the objection made by Dr. Elsberg, namely, that they were liable to unduly perforate and lacerate the adjacent tissues. To obviate that he had employed an instrument devised by Mr. Lenox Browne, of London. Dr. Brandeis believed that Dr. Jarvis' views concerning removal of a portion of the septum by means of a punch were correct. In those cases there was always more or less occlusion, and removal of a piece by punching did not remove the obstruction, but simply allowed the current of air to pass through into the already dilated opposite nostril.

Dr. A. H. Smith had used Jarvis' snare, and regarded it as a great addition to the mechanical means for the treatment of difficulties in the nasal passages. But he thought that Dr. Jarvis had not dwelt sufficiently on the advantage of the tempered steel piano-wire over all others. He regarded the rigid piano-wire as essential to success in the use of the écraseur. It enabled the operator to encircle the growth more readily than by means of a more flexible wire, and was much more efficient than annealed wire in all these operations.

There was one fact which should not be lost sight of, and it was that, whenever the nasal passages are obstructed to any considerable extent and the patient breathes through the nose, there must be with every inspiration a lessening in pressure in the nasopharyngeal space, and hyperæmia is a necessary mechanical result, and hypertrophy a consequence. With regard to anterior hypertrophy, he thought he could accomplish all that was desirable without resorting to either cutting, evulsion, or the use of the snare. For that purpose he uses mono-chloro-acetic acid, and the positive advantage which this agent possesses is that the eschar does not fall until cicatrization takes place beneath it.

Dr. Bosworth said that he had used the chloro-acetic acid for several years, and since he first directed attention to its beneficial effects, he had met with very satisfactory results.

Dr. M. J. Roberts, speaking from the standpoint of the general practitioner, said that he had used Jarvis' snare in the treatment of anterior hypertrophy and with excellent results, and he thought it was an operation which general practitioners could perform readily. He had not attempted to use the snare in the treatment of posterior hypertrophy.

Dr. R. P. Lincoln thought the instrument exhibited illustrated very well the progress which had been made until we had arrived at the perfect one

we now have. He had seen used and used nearly all methods of treating these cases, and certainly this one was infinitely superior to many others. However, it was not the chief method, and others had been employed with equally satisfactory results, and probably in many cases the galvano-cautery, or the chloro-acetic acid, or, as he had commonly used, the chromic acid and Vienna paste, all of which are thoroughly manageable in most of these cases, were even better adapted to the removal of the growth.

Dr. B. Robinson had used the snare, and he thought it was more painful than one would be led to believe from the description given, and it was liable to be followed by hemorrhage, even if half an hour or an hour was consumed in removal of the growth. He was not thoroughly convinced of its superiority over the galvano-cautery, and, indeed, as a practical instrument, he was disposed to regard the galvano-cautery as quite as useful as the snare.

Dr. Jarvis, in his concluding remarks, desired to correct a false impression received by Dr. Elsberg. He had not made the statement that the practice of posterior rhinoscopy had been neglected abroad, but that he had "learned" such was the case. The eminent American laryngoscopist, Dr. Daly, stated in the last number of the *Archives of Laryngology* that, when abroad, he had observed only two examinations of the posterior nares in London's largest throat hospitals. Dr. Jarvis has also been apprised of this fact in conversation with American throat specialists who had been in Europe.

In regard to the use of wire in snares, referred to in the discussion, he did not use the annealed wire with his écraseur. He considered the instrument useless in most cases unless the tempered steel piano-wire introduced by him into the profession was employed, while single or double strands of annealed steel or brittle brass wire might suffice for removing small gelatinous polypi and soft turbinated hypertrophies. It would invariably fracture when used to excise fibro-cellular hypertrophies.

Dr. Elsberg said he thought that Michel had described and used the same kind of wire some six years ago.

Dr. Jarvis said he had carefully searched the foreign and domestic literature on the subject, but found no mention made of the efficiency of well-tempered steel piano-wire. In regard to the use of the galvano-cautery, he had witnessed, through the courtesy of some of its enthusiastic advocates present, a fruitless attempt to remove with the incandescent platinum loop a tumor occupying the naso-pharynx. The cause of failure, in this instance, was displacement of the wire loop and the impossibility of seeing the wire and noting the moment of incandescence. This same objection would apply to the removal of all growths situated in remote parts of the nasal cavity. Another objection, recognized by a well-known galvano-cautery expert, Dr. Carl Seiler, of Philadelphia, is the acute coryza which so often follows scarification of hypetrophied turbinated tissues with the platinum knife. The cold steel wire excludes this complication. He would attribute the severe hemorrhage mentioned by Dr. Beverly Robinson as occurring in one of his patients, either to the hemorrhagic nature of the growth and the employment of insufficient time in its excision, or to the tearing off of a shred of the turbinated tissue with the removal of the severed hypertrophy. He did not consider half an hour or an hour sufficient time allowed in removing large posterior hypetrophies. Two, three, and sometimes four hours were required in some cases, the time depending upon the vascularity of the growth, which could be determined by its gross appearance.

Although he had operated in public and many times in private practice, he had never met with a single case in which severe bleeding followed excision of posterior hypertrophies. The suggestion made by Professor Bosworth, in a lately published article, of leaving the excised tissue undisturbed for several hours, he considered a valuable one.

The pain and hemorrhage depended entirely upon the manner in which the operation was performed, and the adjustment of the details to meet the varying conditions should be most carefully observed, and could be easily acquired by a careful and intelligent study of the minutiæ of the operations.

Dr. L. L. Seaman then exhibited

A NEW APPARATUS FOR TREATING FRACTURE OF THE PATELLA.

There were two bands of perforated raw-hide, one for the leg the other for the thigh, united by pointed steel bars, adjustable at any angle by means of a key. In addition there were two crescent-shaped bodies attached to the integument, one above and the other below the fractured bone, by means of adhesive plaster, and retained in position by means of catgut joined to the splint. The advantages claimed for the apparatus were: (1) it gives complete apposition and control of the fragments without punishing the patient; (2) the injured parts are fully exposed to the surgeon's view; (3) it does not constrict the parts and interfere with the circulation; (4) if there is a wound it can be easily dressed without disturbance to the fragments; (5) the angle of the limb can be changed without removing the apparatus. While wearing it the patient could go about without harm to the injured parts.

Dr. Seaman also presented an apparatus for supplying an artificial fibula, and also what he called the surgical stethoscope.

Dr. F. V. White said that the apparatus for fracture of the patella was no simpler than Turner's, described in The Medical Record for July, 1867.

Dr. Malcolm McLean thought that the inability to obtain such apparatus readily was a practical objection of considerable importance. The principle involved in its construction was undoubtedly correct; but he thought that the same principle could be applied in a simpler way, and that which he had used with very favorable results was what is commonly known as Buck's extension.

Dr. Seaman thought that one special advantage which his apparatus possessed over Buck's extension was that it permitted the patient to be up and out.

The President announced the death of Dr. James R. Wood, Dr. Wm. Rogers, and Dr. L. de Bremon.

The President further directed attention to the fact that the families of Drs. Rogers and de Bremon had been left in needy circumstances, and that subscriptions for their relief could be forwarded to Dr. L. H. Sayre, 285 Fifth Avenue, for the family of Dr. Rogers, and to Dr. Plasse, 78 West Twelfth Street, for the family of Dr. de Bremon.

The society then adjourned.

Nitrite of Amyl in Infantile Convulsions.—Dr. A. E. Bridger, of Paris, reports five cases (*Lancet*) in which he successfully used nitrite of amyl for infantile convulsions. The drug was given internally and by inhalation.

NEW YORK SOCIETY OF GERMAN PHYSICIANS.

Stated Meeting, November 25, 1881.

DR. SCHARLAU, PRESIDENT, IN THE CHAIR.

FOREIGN BODY CARRIED IN THE EYE WITHOUT DISCOMFORT.

DR. OPPENHEIMER exhibited an elderly man, who had carried a steel splinter in his eye for nineteen years without the slightest discomfort. The foreign body was readily visible in the anterior capsule, the iris being adherent at this point. The man's vision was good, though not perfect, amounting to $\frac{2}{3}$. Cases like the present one were quite rare. The rule which should apply to all cases of this kind was, the earliest possible removal of the foreign body.

ALBINISMUS FACIALIS ACQUISITUS.

DR. JACOBI showed a young girl who had acquired a partial albinism in the course of a disease, the principal symptom of which was a regularly recurring headache, lasting from morning till afternoon, and extending over a period of about two weeks. Photophobia was also a prominent symptom during the course of the illness. A whitish discoloration was first noticed over the chin, and similar patches soon appeared elsewhere. The eyebrows and eyelashes also lost their color. At length the pain became localized in the supra- and infra-orbital regions. Galvanic reaction was normal throughout, and the arterial tonus not impaired. He considered the disease as a trophoneurosis involving branches of the trigeminus. Under a course of treatment, consisting in the exhibition of quinine and arsenic, with the persistent use of the galvanic current, an improvement was taking place. Even now, the color was unmistakably returning to some of the blanched hairs.

DR. HEINEMANN presented three specimens of intestinal rupture, and gave an account of their histories. He also showed specimens from a case of epidemic cerebro-spinal meningitis (see MEDICAL RECORD, Nov. 5, 1881).

SARCOMA OF TESTICLE.

DR. SEIBERT presented a specimen of large tumor of the testicle, which he had removed by castration, several weeks ago. The patient was fifty-four years old, and had first become aware of an increase in the size of his left testicle about a year since. His general health had remained good. The neoplasm extended upward into the inguinal canal. Although there was apparent fluctuation at this point, no fluid appeared on aspiration. The adjoining glands were not implicated. There were but few adhesions of the growth to adjoining tissues, and the operation was easily performed. Union by primary intention occurred. The operation being wholly within healthy tissue, rendered the prognosis favorable. On microscopical examination, the tumor was found to be a round-celled sarcoma. No trace of testicular tissue remained.

DR. GARRIGUES exhibited a newly devised instrument to be used as a vaginal depressor, in connection with Sims' speculum (see MEDICAL RECORD, December 17, 1881).

DEATH BEFORE OPERATION IN AN ATTEMPT AT SECONDARY TRACHEOTOMY.

DR. DEGNER reported a case as follows: Primary tracheotomy was successfully performed in a child suffering from diphtheritic laryngo-stenosis. The anæsthetic employed was chloroform, and it was well borne by the child. Two weeks later, the canula was removed, and the wound then closed quickly. After the lapse of another fortnight, however, cough and dyspnœa developed, and soon became so distressing that a second tracheotomy appeared necessary.

In attempting to give the child the anæsthetic it struggled violently, and showed signs of extreme fright. The chloroform was immediately removed, in order to allow the patient to grow calm, when it was noticed that the child had ceased to breathe.

The trachea was at once opened, and vigorous efforts at resuscitation instituted; but the child was dead. A small granulation tumor was subsequently removed from the trachea. The presence of several growths of this kind admitted of no doubt. An autopsy was refused. Dr. Degner was at a loss to account for the fatal issue in this case. The child had certainly not died of suffocation, and death from chloroform was likewise improbable.

DR. BLIDEN expressed his opinion to the effect that protracted dyspnœa had very likely led to carbonic acid poisoning with sudden cardiac paralysis.

DR. OBERNDORFER remarked that sudden death from paralysis of the heart had been repeatedly observed after diphtheria.

DR. JACOBI said that the assumption of cardiac paralysis in consequence of previous diphtheria, appeared justifiable only when symptoms of paralysis had appeared intra vitam. In the absence of an autopsical record, a decision could not be made whether the fatal issue was directly due to cardiac or cerebral death. Nor would any significant anatomical lesion be discoverable, if death were due to fright alone. Since the child had inhaled no chloroform, of course, death from this source was out of the question. Besides, children as a rule, bore this anæsthetic well, and existing dyspnœa was usually diminished.

In this connection, he alluded to a case that had come under his observation some years ago. Orthopnœa in this instance was invariably observed at night. Nothing was visible with the laryngoscope, and he diagnosed a polypoid growth attached to the anterior wall of the trachea, which would naturally interfere with respiration in the dorsal decubitus. This diagnosis was verified by a subsequent operation.

Stated Meeting, December 23, 1881.

DR. GRUENING, PRESIDENT, IN THE CHAIR.

PULMONARY ATROPHY FOLLOWING RECURRENT ATTACKS OF PLEURISY.

DR. KUDLICH presented a specimen of atrophic lung, removed from the body of a man who had suddenly died after an attack of violent dyspnœa. The patient was fifty-nine years of age, weighed three hundred pounds, and had formerly lived in Texas, where his first attack of pleuritis occurred. Subsequently he suffered three other attacks of this disease.

Dr. Kudlich was hastily summoned to attend him one evening, but upon his arrival the patient was found dead. He learned that soon after eating his supper, the patient was seized with severe pains in the left side, accompanied by intense dyspnœa, and the usual sense of impending dissolution. There was also some expectoration of bloody mucus. The patient then suddenly expired.

At the autopsy the left lung was found to be re-

duced to about the size of a goose's egg, and enveloped in a thick, unyielding membrane. This remnant of lung tissue contained a fibrous plug in its centre. The right lung showed vicarious emphysema, but was in other respects normal. A special examination of the pulmonary vessels disclosed no morbid change in their structure. The larynx was not examined.

ENDOLARYNGEAL REMOVAL OF A SPLINTER OF BONE.

Dr. Gruening exhibited a pointed piece of bone, 18 millimetres in length, which he had removed from the larynx of a woman a short time ago. The foreign body had been swallowed five days before its removal, the patient having had a suffocative attack of short duration at the time of the accident. When the dyspnœa was relieved, the only remaining symptom consisted of violent pains accompanying deglutition. Dr. Gerster made an examination of the pharynx and œsophagus, but was unable to discover any obstruction there. As there was no alarming dyspnœa at that time, and the patient only showed complete aphonia, the operation of tracheotomy was deemed unnecessary. Dr. Gruening, who was called in consultation, found a whitish-looking body projecting between the vocal cords, and apparently firmly lodged there. Attempts to remove the foreign body were unavailing at first, because the instrument could not securely seize the bone splinter. At length, however, he succeeded in grasping and removing it, whereupon the former pain immediately ceased. The aphonia persisted for five days, and then the patient regained a natural voice. Dr. Gruening expressed the opinion that in cases of this kind, or when any angular or pointed body had found its way into the respiratory passages, laryngoscopic examination, followed in suitable cases by endolaryngeal operations, should never be omitted. On the other hand, when we were dealing with rounded bodies, immediate tracheotomy, as recommended by Schüller for all foreign bodies, seemed to be clearly indicated.

Dr. Gerster took exception to the universal applicability of the rule, especially from the standpoint of the general practitioner. Endolaryngeal examinations and manipulations could scarcely be expected of the physician in general practice, whereas tracheotomy was always within the range of possible interference. Certainly when respiration was embarrassed, tracheotomy offered the most reliable safeguard against impending asphyxia. The case under consideration was an exceptional one in this respect, as respiration had not been much interfered with, and because the services of a specialist were quickly obtained. Schüller's rule about tracheotomy in all cases of foreign bodies in the air-passages must therefore be upheld in the great majority of cases, especially those occurring in country practice.

DENTAL PLATE REMOVED FROM LARYNX.

Dr. Oppenheimer showed a dental plate, which he had removed from the larynx of a woman fifty years of age. The operation was rendered difficult owing to the presence of several hooks which had served to attach the plate to the natural teeth of the patient. Some degree of force was, therefore, necessary, and this resulted in laceration of one of the vocal cords.

FLOATING CARTILAGES OF KNEE-JOINT.

Dr. Gerster presented a specimen of an articular body (*Gelenksmaus*) removed by incision from the knee-joint of a patient. The origin of the formation was ascribed to traumatism. The body was one inch long and half an inch broad. Healing by primary intention took place, and the patient retained good use of the limb. He also exhibited some articular excrescences removed by incision from the knee-joint of a girl fourteen years of age. The indications for operative interference had consisted of recurrent effusions following strangulation of the excrescences between the joint surfaces. The foreign masses were found to be attached to the lower border of the patella, and had evidently grown from the articular ligaments. The result of the operation was in all respects satisfactory.

In this connection Dr. Gerster made some remarks about what he considered the

UNPOPULARITY OF ANTISEPTIC PRACTICES IN THIS COUNTRY.

This remarkable condition of affairs, he thought, was mainly owing to the absence here of surgical clinics, in the European sense of the term, *i.e.*, clinics for didactic purposes and for the collection of statistical data, which were regularly published, thus submitting surgical methods and innovations to the intelligent criticism of the profession.

Another grave drawback, he thought, was to be found in the too-rapid rotation of service, a system which prevented the surgeon from properly utilizing his material. In this way the criterion of comparison with the results of others was lost to the visiting surgeon, and he was lulled into a sense of satisfaction with his often quite indifferent or even poor results.

But there was another circumstance which should not be lost sight of in attempting to explain the non-enforcement of Listerian practices here. As compared with the older German clinics and hospital wards, most of our institutions were in a vastly better hygienic condition, so that antiseptics, on that account alone, were less indispensable.

DEEP OPENING OF THE MASTOID PROCESS.

Dr. Knapp narrated this case as follows: A young lady, aged sixteen, had suffered from otitis media, with partial deafness, for a long time. The drumhead, though opaque, showed no perforation. There was spontaneous pain in the region of the neck, and tenderness on pressure over the mastoid process. General treatment, continued for a period of two weeks, established no improvement. The mastoid process was therefore laid bare, and opened by means of the chisel. The periosteum and surface of the bone looked healthy; but to the distance of four millimetres the bone was found bloodless and abnormally hard, and beyond this distance quite soft and congested. At a point about seven millimetres from the surface the probe came in contact with soft parts, and immediately a copious flow of venous blood occurred. Dr. Knapp therefore concluded that he must have opened the lateral sinus, and at once terminated the operation by closing the wound and inserting a drainage tube. Union took place by primary intention, except at the point corresponding to the insertion of the drainage-tube. The previously existing intense cephalalgia disappeared from the time of the operation. The bleeding was too profuse to be accounted for by hemorrhagic softening.

Dr. Knapp added, that severe and distinctly localized, protracted headache always constituted an indication for opening the mastoid process. In such cases, Wilde's incision would suffice, if the

superficial parts of the bone were found diseased; but recourse must be had to the chisel if these were found healthy. Antiseptic precautions he had not employed, and did not consider essential.

NECROSIS OF PETROUS PORTION OF TEMPORAL BONE.

Dr. Knapp presented a specimen consisting of the entire petrous portion of the temporal bone of a child of six years of age. It had been sent him by Dr. Pollack, of St. Louis, who stated that it had come away spontaneously, leaving the child well and healthy.

Dr. Gerster, referring to the success of Dr. Knapp's first case, remarked that strict cleanliness, by excluding the chance of infection, should be considered among the antiseptic precautions of wound-treatment. With small wounds, simple measures of that kind might suffice; but the surgeon was often called upon to expose very much larger surfaces, and to operate in cases complicated by the presence of numerous channels and pockets. The conditions in such cases were far different from those existing in trifling operations upon the mastoid process or eyeball. The danger from infection increased *pari passu* with the length of time required for an operation, and the frequency of contact of the wound with instruments, sponges, the hands of assistants, etc. At the present time there could be no question of the utility of antiseptic measures, even if the non-advocates of the Lister system could show good results under a different mode of wound-treatment. The criterion of successful antisepsis was to be found in an aseptic healing of the wound.

Dr. Gruening said that it did not appear altogether certain that in Dr. Knapp's case the sinus transversus had been opened, for profuse bleeding was apt to occur in the cancellous tissue of any inflamed bone. He then related the following case:

A few days ago he had opened the mastoid process of a young man. The soft parts over the bone were tender and swollen. The patient having given a well-marked history of syphilis, specific treatment had preceded the surgical interference, but without success; nor did an incision after Wilde produce any noteworthy benefit, although the periosteum was clearly thickened. In the subsequent operation by chiselling, the bone was found healthy. Nevertheless, a marked improvement of the patient's condition followed the operation, and the wound healed kindly.

In this case there had been no disturbance of hearing, no catarrh of the middle ear, and no redness of the external auditory canal. It would appear, therefore, that the indications as formulated by Hotz, were not always proper ones. The periosteal covering of a thin plate of bone might become inflamed, and lead to an effusion into the corresponding mastoid cells. The latter need not necessarily be purulent in nature to produce symptoms of a grave type.

Dr. Rudisch could not agree to the indications for surgical measures as laid down both by Dr. Gruening and Dr. Knapp. In his opinion, the local abstraction of blood was sufficient to account for the improvement which was seen in these cases.

Dr. Gruening replied that in cases of this kind specialists resorted to such operations precisely with that end in view, viz., local depletion for purposes of revulsion.

The Virchow Fund has reached the sum of 76,612 marks (about $20,000).

Correspondence.

A REPLY TO "CONCERNING FREEDOM IN CONSULTATIONS."

To the Editor of The Medical Record.

Dear Sir: I trust that you will permit me to reply to a letter published in the Record of May 15th, which is entitled, "Concerning Freedom in Consultations." I must, however, frankly state, before I commence, that I am strongly opposed to two rules in the new code, yet I will endeavor to state my argument so temperately that no one may be offended.

I read the paper mentioned above, I confess, with pain, for it differed so entirely from that which I considered right, that I was unwilling to think I walked in such mental blindness that even now the brilliant effort of a most eminent jurist failed to give me light.

It is certainly with great diffidence that I presume to criticise the article in question, yet having the courage of my convictions, I claim your consideration in expressing them. It is primarily intimated by the learned writer of this paper that a rule which forbids a regular doctor from consulting with an irregular is unethical, because it is a restriction of a great rule of morality. I presume the restriction in question is that our chief aim is to give relief to suffering humanity. This is the keystone of the arch, and granting Prof. Dwight's premises that the old code legislated against humanity, his logic is unanswerable. Now, here is where I with justice can take exception to Dr. Agnew's view that the learned gentleman in question is perfectly suited as an umpire in this discussion. No one, howsoever learned or how impartial, who has not studied all systems of medicine, can be a judge in whom both sides can have confidence, and I will, I trust, show that Prof. Dwight has not sufficiently investigated this subject for his deductions to be of value. It should have first been shown to the learned professor that the vast majority of the regular profession consider homœopathy, eclecticism, and other schools which may indeed be "lawful" in a legal sense, as bad schools which breed doctrines that are untrue and train graduates who from a false method are dangerous to society.

The logical deduction from this is, in my mind, that a body of men who, if they are honest homœopathists, are so terribly mistaken, and who, if they are not honest, are such pitiful impostors, should not be encouraged by men who have drawn wealth and knowledge from that great public who have had confidence in their protection in the past and reliance upon their judgment for the future. The question I would ask such of these gentlemen who were instrumental in altering the code and are teachers, is this: Do they believe in homœopathy? Have they ever taught or written that like cures like, or that infinitesimal doses do good, or that it is wholly unallowable to mix two remedies? I have listened to many of these gentlemen, and I have never heard these doctrines advocated. Well, it is then conceded that these gentlemen do not advocate homœopathy? Do they still believe that homœopathy is bad in theory and disastrous in practice? Do they, in short, hold that they only sanction consultation because of humanity? Surely Prof. Dwight knows that the greater humanity is to save the most of mankind, even though the few suffer. Better, far

better, that a rich man lose an eye in New York than that many in the wilderness lose their lives from peritonitis or pernicious malaria. I would not interfere with any man's liberty, but I would not call license liberty. Many crimes are committed in liberty's name, but none more illogical or derogatory to our honor, in my opinion, than this so-called liberal code.

Prof. Dwight has, I think, again misinterpreted the letter and spirit of the rule which relates to consultations when he lays such stress upon emergencies. Emergencies do not govern this rule. It simply apologizes for the first clause. You may meet a homœopath, it declares, at any and all times, because emergencies sometimes occur. Would it not be dignified and even more humanitarian to say: Meet any man if his patient is dying and no one of *his own belief* can be procured.

Would not this be more honorable to the profession at large? Would it not be more satisfactory to any one who would not wish to consult simply for a fee?

These difficulties have not apparently been put before Prof. Dwight, otherwise I cannot help thinking he would at least have attempted to solve them, for without this even the Academy may say peace, but there can be no peace.

When the reason why we should recognize homœopathy is given in a logical and non-partisan manner, it will be time to discuss it. Until then we cannot be expected to acquiesce under a gag-law system, which even has not the respectable sanction of the majority of the profession.

One thing more and I have done. There was a suspicion, if I mistake not—a mere suspicion of a legal threat—when the learned professor intimated that as the law gave the law could take away. Does the learned gentleman presume to say that the law, in preventing ignorant men—I do not speak of "lawful" practitioners—from preying upon the public, confers a favor upon the regular profession more than upon society at large? If the law which prevents men who have no diploma from practising was granted solely upon the condition that we recognize homœopaths and other lawful doctors, it had better be annulled. The regular profession can pay no such price for loss of honor and consistency. Were it not foreign to make comparisons, I could, perhaps, show that no profession more jealous of its integrity and honor exists than that to which Prof. Dwight belongs, and it is on that account that I would request, in justice to himself, that he consider well such a question as this before he assumes to be its arbiter.

MARTIN BURKE.

141 LEXINGTON AVENUE.

SPURIOUS VACCINE VIRUS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have been much interested in the various communications on vaccination which have lately appeared in your columns. Misery likes company, it is well known; and I felt pleased to see that I was not alone in my want of success with the "pure bovine virus." The usual advertisement informs you that duplicates will be furnished in case of failure in primary cases; but I have almost invariably been informed on returning unsuccessful points that it was strange they did not take—hundreds of same batch had been sold, and I was the only one to complain. I have so often had this insulting style of language used, that I now rather lose my duplicates than risk the loss of temper involved in asking for them.

Dr. Garrigues and "Disgusted Vaccinator" record from 75 to 87.5 per cent. failures. I have not kept a record sufficient to enable me to give exact figures; but I know that I have frequently failed in from eight to sixteen consecutive vaccinations. I have usually bought a dollar's worth at a time, and out of the eight or ten points have felt pleased to get two successful vaccinations. I have frequently observed the nævus-like fungous vesicles spoken of by Dr. Garrigues, and feel certain they must be the cause of much fancied security where none exists. These vesicles, or neoplasms, seem to be of sufficient frequence and importance to require careful study at the hands of experts.

From my own experience, and that of friends, with bovine virus as usually supplied, I am compelled to look with suspicion on the statistics of those interested in the question in a commercial sense. Boards of Health vaccination statistics, I fear, would scarcely bear close investigation, judging from the little I have seen of their modes of working. I always personally examine each case, at the end of a week, as I can no longer take success for granted; nor could I trust the opinion of the parents, owing to the frequence of the fungous growths simulating the true vesicle.

This uncertainty of "taking" is a matter of vast importance at times. In three cases recently, on small-pox breaking out in families I was attending, I immediately vaccinated the rest of the family with complete failure in each case, though several were primary. I managed, by perseverance over several weeks, to get all vaccinated, but meantime what a risk they ran!

To blame the great want of success on imperfect methods of operation will scarcely hold good, seeing that experts emphatically condemn each other's method, as pointed out by "Disgusted Vaccinator." I have tried all plans, with about equal non-success. Between the usual want of success and the occasional volcano-like sore, threatening the loss of the arm, I sometimes feel like giving bovine virus up in disgust. A return to "ye good old way" is not far off, I predict.

SPECULUM.

BROOKLYN, May 15, 1882.

ARMY NEWS.

Official List of Changes and Duties of Officers of the Medical Department, United States Army, from May 14, 1882, to May 20, 1882.

Lieutenant-Colonel GLOVER PERIN, Surgeon; Major WILLIAM C. SPENCER, Surgeon; and Captain PHILIP F. HARVEY, Assistant Surgeon, directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in St. Paul, Minn., on June 6, 1882. S. O. 114, A. G. O., May 17, 1882.

Majors C. T. ALEXANDER and J. H. JANEWAY, Surgeons, and Captain R. H. WHITE, Assistant-Surgeon, detailed as members of a board of medical officers to examine into physical qualifications of members of the graduating class, and of candidates for admission to military academy. S. O. 110, A. G. O., May 12, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 20, 1882.

Week Ending	Typhus Fever	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria	Small-pox	Yellow Fever
May 13, 1882.	10	7	186	8	157	73	21	0
May 20, 1882.	16	5	184	3	196	74	18	0

THE LATE MR. DWYER is exciting more attention dead than living. Objection has been made to a moral which we ventured to draw from his life and death, to the effect that a "hypertrophied" physique, so to speak, is not necessarily the most robust one. A city man, of good health and moderate development, has a better chance in a confining sedentary life than the country-bred athlete, with his powerful lungs and heavy muscles. Those acquainted with modern physiology and pathology will readily acknowledge the antecedent probability of such a view. It has been abundantly demonstrated, practically, in that city of clerks, Washington, D.C., as well as here.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE meets at Montreal on August 23, 1882, under the Presidency of Principal Dawson, of McGill University. Work will be done in Sections on Biology, Histology, Anthropology, etc.

WHAT LUNATICS THINK CONCERNING THE RESPONSIBILITY OF THE INSANE.—At the debating society organized by the patients in the Lunatic Asylum at Hanwell, England, the question of the responsibility of the insane was recently discussed. The conclusion was reached that the insane ought to be considered responsible. One of the patients, who shot at the Queen of England, confessed that he never would have done it if his predecessor in the same crime had been executed.

THE SMALL-POX SCARE which recently existed in Cincinnati has much abated. The Academy of Medicine met and passed resolutions deprecating the unnecessary and sensational reports that had been made, and assuring the public of the security to be found in vaccination.

SPONGE-GRAFTING.—Dr. Morton, of Glasgow, successfully grafted thin layers of sponge upon a large leg-ulcer. The pieces gradually came away, however, and very little good was done. This is the third successful case reported.

A NEWSPAPER REPORT OF A MEDICAL CASE.—A medical friend, to whose writings references were made in an article which appeared in a recent issue of a daily paper in this city, desires us to say that the article, evidently inspired by some enthusiastic admirer, is to the doctor a most painful surprise. The fact that his own name was omitted from the article is some mitigation of the pain of mind which it has caused him, yet nothing could be more repugnant to his feelings than the mention of the names of distinguished colleagues in such a connection. We are assured that the gentleman in question has never made use of the daily press, directly or indirectly, to advance his views of medical topics, and that he not only does not seek newspaper notoriety but that it is extremely distasteful to him.

"FIFTY-TWO DOCTORS at Albany," says a Western medical journal, "reckless of honor but greedy for gold, undertook to sell out the regular profession, but only succeeded in selling themselves—and very cheap at that." We quote this judicious criticism without comment.

THE NEW YORK NEUROLOGICAL SOCIETY.—At the meeting of this society, May 2, 1882, the President elect, Dr. Spitzka, delivered his inaugural address. After some discussion a resolution was passed, by a vote of 35 to 7, condemning the manner in which the election of Dr. Spitzka had been secured. A paper was read by Dr. Corning.

REGARDING A COLD IN THE HEAD.—The French have a saying, "All that physicians have been able to do as yet for a cold in the head is—to call it *coryza*." The following conversation summarizes also some very prevalent modes of treatment:

"What do you do for a cold in the head?"

"I treat it—with contempt. And you?"

"I? When I have a cold in the head—I sneeze."

AMERICAN MEDICAL ASSOCIATION — COMMUTATION RATES TO ST. PAUL, MINNESOTA. — Dr. Alex. J. Stone, Chairman of Committee of Arrangements, of St. Paul, Minnesota, writes: "In anticipating the meeting of the American Medical Association in this city on the 6th, 7th, 8th, and 9th of June prox., the Committee of Arrangements have secured the following rates from the various railroads centring at this point:

"The Chicago, Milwaukee & St. Paul R.R. offers a rate of $12.50 for a round-trip ticket from Chicago to St. Paul and return, to delegates and ladies accompanying them upon presentation of credentials at general or depot offices in Chicago; also return tickets to all points this side of Chicago for one-fifth fare, on certificate from the chairman of the Committee of Arrangements.

"The Chicago, St. Paul, Minneapolis & Omaha offer the same rates from Chicago and all points between Chicago and St. Paul; also from Sioux City and all points north. From Omaha and all points south, two cents a mile for round-trip tickets.

"The Minneapolis & St. Louis R. R. offer the same rates ($12.50) from Chicago to St. Paul and return, via the Chicago, Rock Island & Pacific R. R., and a rate of $18 from St. Louis to St. Paul and return, via St. Louis, Chicago, Burlington & Quincy R. R. (via Albert Lea). Also one-fifth fare returning to all intermediate points.

"All tickets on above roads good till July 10th.

"The St. Paul, Minneapolis & Manitoba R. R. will give passes to every delegate and to ladies accompanying them, over all divisions of its road, good for the entire month of June. Their road runs through the celebrated Red River Valley and the great wheat farms to Winnipeg. It connects Minneapolis and Lake Minnetonka (the largest watering-place in the State, with four large hotels) with St. Paul.

"The Northern Pacific R. R. will return all delegates for one-fifth fare, and offers free transportation for the month of June to delegates and ladies accompanying them to the Yellowstone Valley and return.

"The St. Paul & Duluth R. R. offers free passes to delegates and ladies accompanying them

over their line to Duluth on the north shore of Lake Superior and return.

"The two lines of river packets, viz.: The St. Paul & St. Louis Packet Co, and the Diamond Jo line, offer one-half transportation rates from all points to or from St. Paul. (They charge full rates for berths and meals.)

"The Lake Superior Transit Co. offer the following rates: Buffalo to St. Paul, one way, $27.10; round trip, $47.20. Erie to St. Paul, one way, $25.40; round trip, $45.60. Cleveland to St. Paul, one way, $23.75; round trip, $39.20. Detroit to St. Paul, one way, $21.20; round trip, $35.20.

"Meals and state-rooms on steamers are included in the above rates.

"The above company have also offered a complimentary excursion down the lake and return, from Duluth, one day immediately after the meeting.

"The hotels of St. Paul are the Merchants ($3 to $3.50); Metropolitan ($3 to $3.50); Windsor ($2.50); Clarendon ($2.50); Sherman ($2.50); International ($2); St. James, ($2); and Commercial ($2). The three first are provided with elevators.

"The Opera House, in which the general session will be held, seats a thousand persons.

"Minneapolis, a city of sixty thousand, lies nine miles from St. Paul, on the line of the St. Paul, Minneapolis & Manitoba road, and has fine hotel accommodations. Half-hourly trains connect the two cities. Trains run almost hourly to and from Lake Minnetonka."

No reduced rates can be obtained from this city to Chicago. Beyond the latter point the Chicago & Northwestern Railway Co. will also give a ticket to St. Paul and return for $12.50; from Chicago to St. Paul and return, via Omaha, for $36.95, while round trips from St. Paul to Fargo, to Winnipeg, and to the Yellowstone country will be free to delegates and their families.

All additional information will be furnished by Mr. L. F. Booth, General Eastern Agent Chicago & Northwestern R. R., 415 Broadway, N. Y.

The Georgia Medical Association held its annual meeting at Atlanta, April 19.

Remittent Fever with Peculiar Pulse-rate.—Dr. L. W. Baker, of Buchan, Mich., sends us the following note regarding some peculiar cases of malarial fever which he has been treating. He writes:

"I have lately attended several cases of remittent fever which to me are peculiar, and I should be pleased to have some one explain them. I shall not give an extended record of the cases, but the main facts.

"When first called, before any medicine had been given, I found dry hot surface with temperature varying in the different cases from 103° to 105°, and pulse only from 72 to 80 per minute, heart-sounds normal and agreeing in frequency with radial pulse, which was full and strong.

"The fever very stubborn, lasting ordinarily from seven to fourteen days, and in one case four weeks, notwithstanding that cinchonism was repeatedly produced.

"Calomel in each case was given at beginning treatment in cathartic doses, and occasionally during treatment in small repeated doses. The excessive fever was readily controlled by cold sponging and cold sheets.

"In but one case did the pulse after breaking of the fever fall but a few degrees, and that was in the last case. First day, temperature 105°, pulse 72. Seventh day, temperature 99°, pulse 56.

"A brother physician reports to me two similar cases in his practice."

The Working of the Registration Act has on the whole been quite successful, according to Dr. Sturgis, who gives the following account of it:

"Several cases are now under consideration, and will receive attention in due time. Abram E. Cox was our pioneer case, and he is also the first man we have had indicted for a second offence. He was a paper-hanger by trade, but had a diploma which he had bought from the defunct Medical School at Castleton, Vt. On his promise to take down his sign and not practice any more, we have deferred sentence on the second indictment, which is a prison offence. Flower and Johnson, who were recently tried, pleaded guilty; the former was fined $200 and the latter $50, and each paid the fine. The trial of Seither is postponed until the principal witness for the prosecution is released from the Penitentiary. August Furneau, who was indicted for malpractice, having killed a child and nearly killed the mother, forfeited his bail.

A Plea for So-Called "German Theories."—It is a false idea some have of railing at German theories. I have some respect for a medical theory founded on twenty years' experience and study of thousands of cases. Theory, of course, is not truth, but is founded on truth, and is a precursor of other truths. Really the Germans are a most practical people, as practical as theoretical. They do not, at least, found an absurd theory on ten hours' observation, but their theories are the results of lifetimes of observation. The fanatical London professors tell the students coming here, by all means avoid the Germans, do not listen to them, only look at their cases; and I know a young Englishman who is in a state of continual trepidation lest he should catch a German idea. Myself I have no doubt that he has been so thoroughly inoculated with weak English theories that his mental constitution is proof against the German theory epidemic.—*Correspondence Buffalo Medical and Surgical Journal.*

Surgical Instrument Manufacturers and Dealers in Council.—A convention of surgical instrument makers and dealers, comprising all the principal manufacturers of the United States, was held at the Astor House, New York City, May 2 and 3, 1882. The object of the convention was for mutual consultation, to enable manufacturers to keep their products up to the best standard and regulate uniform prices for consumers.

At the close of the meeting the following resolution was unanimously adopted:

"*Resolved*, That in learning, in character, in usefulness, in all that goes to the making of men honorable among their fellow men, we hold the medical profession of our country second to no other class of men. That as co-laborers with them in our sphere, in our work of preventing, alleviating, and removing human suffering, we pursue a vocation honorable in itself, worthy of our best ambition, and deserving our most faithful effort."

A Time of Predilection for Fecundation is thought by Cohnstein to exist for every woman. He gives some illustrations showing that certain women were most likely to conceive at a certain time of the year.

Original Communications.

THE SEQUELÆ OF MEASLES,

With Special Reference to the Development of a Strumous Diathesis.*

By V. P. GIBNEY, M.D.,
NEW YORK.

A case of spinal irritation in a maiden lady, thirty years of age, has recently come under my care in the hospital, and as the patient had been for many months under frequent observation of an eminent gynecologist, who assured me that the uterine disorder, viz., a retroversion with pelvic cellulitis, would not account for the gravity of her neuroses, I determined, in getting the history, to seek diligently for a cause.

Once or twice in the cross-examination I was led to believe that a fall, distinctly remembered by the lady as occurring when she was eleven years of age, would explain all; but then I learned that two or three years had elapsed before any positive signs of ill-health were observed.

From habit, I asked her about the exanthemata, not expecting her to remember anything about such diseases of infancy, when she replied that to *measles, which came on in her fourteenth year, she felt that all the sickness of her life could be attributed.* It is true that her family history is conspicuously bad, combining both the tuberculous and the neurotic diatheses; but it is equally true that prior to this exanthem she considered herself in fair health, to say the least, and subsequent to it an invalid.

For sixteen years, then, she has been a sufferer, and her history during this period embraces bronchitis, "lung fever," intestinal disorders of various kinds, vesical irritation, "weak back," disturbances of special sense, and fatigue on the slightest exertion, etc. Indeed, the case would furnish profitable study for any and all the specialties, and I take it as an introduction to some remarks bearing on the evolution of a diathesis, strumous, scrofulous, or call it what you may, so frequently found in the wake of a whooping-cough, a scarlatina, or a measles. Diphtheria might well be included in this category, but it is always so difficult to satisfy yourself whether a child has really had diphtheria or one of the simpler pharyngeal diseases. Hence I have taken as my topic the sequels of measles, because this affection, apparently so trivial, is a major exanthem and leaves such conditions of health that I am confident a discussion of the subject cannot be untimely.

In my search for the cause of bone disease in children, extending over an active service of eleven years, I have found this one exanthem standing in such relationship more frequently than any other disease of childhood.

Let me distinctly state at the ontset that I am not discussing rötheln, for my study of this mild affection leads me to infer that no sequels exist, and that its interest lies chiefly in differential diagnosis. Nor do I propose to devote any time to a detailed account of all the sequels observed in connection with measles. The gentlemen of the society can present such as they have encountered, with the best means in their hands for preventing or treating them. Indeed, two of the questions on which I wish to elicit special discussion are:

First.—Does the disease itself or do the complications induce the sequels often so disastrous?

Second.—Can the complications be so managed as to prevent or, at least, to materially lessen the gravity of the sequels?

In a paper read before the County Medical Society of New York, in 1877, on "The Strumous Element in the Etiology of Joint Disease," and published in the *New York Medical Journal* for July and August of that year, I called attention to the frequency with which joint and bone diseases owed their inception to a delayed convalescence from some one of the exanthemata. In two hundred and nine cases of spinal caries analyzed, fifteen were found to have developed very shortly after pertussis, in fact before the cure was complete, and of this fifteen five gave a history of an hereditary predisposition, seven were not investigated on this point, while *three gave histories absolutely free from hereditary diseases.* Measles was found to be the exciting cause in eighteen out of the two hundred and nine. Eight of these were already strumous from an hereditary point of view, one was not investigated, while *nine were free from hereditary influences.* It would seem quite fair to assume, then, that measles contributed to the evolution of the strumous diathesis in eight of the eighteen cases, and was the direct cause of such diathesis in nine cases. Scarlatina was recorded as inducing the disease four times, of which number *one was free of hereditary predisposition*, one was already strumous, and two were not investigated.

Rickets, cholera-infantum, and vaccinia were noted, likewise, as factors in the evolution of struma, and in two cases out of six, closely analyzed on this point, rickets seemed to be the cause, rather than a condition.

I analyzed 271 cases of hip disease, also, and found that pertussis stood in a causative relationship 8 times, *in 3 instances there being no hereditary influences traceable.* Scarlatina seemed to cause the disease 8 times, there being no evidences of diathesis in 6 *of the cases* analyzed with regard to heredity. In 5 cases measles were the exciting cause, and in only 1 case (4 being analyzed) was there found any evidence of heredity.

One hundred and three cases of what is popularly known as white swelling of the knee gave, on analysis: Pertussis, the cause in 4 (2 of which presented already evidence of an hereditary diathesis—the remaining 2 being free); scarlatina, the cause in 4 (heredity influencing only 1 out of the 4); and measles, the cause in 1.

In thirty-two cases of caries of the ankle, measles and scarlatina were, to all appearances, the cause in one instance respectively.

Since the publication of that paper, I have pursued my studies in this direction, and am still further convinced that not only do measles (and whooping-cough and scarlatina) often serve to bring out a strumous diathesis in a child by heredity entitled to the same, but also induce such a diathesis even where the family records are clear of any transmissible diseases. Take the following case: A boy, aged three years, the picture of health, and always regarded as exceedingly healthy. The parents, both of whom I have the opportunity of interviewing, present very good histories, both personal and family. The patient I find, on entering the room, walking about the floor, carrying his head a little stiffly, the shoulders being appreciably raised. He will not turn the head without turning the body

* Read before The Practitioners' Society of New York, May 19, 1882.

at the same time. There is no deformity of spinous processes except a very mild degree of lordosis in mid-dorsal region. Notwithstanding the clear history thus far obtained, I strongly suspect vertebral ostitis, but on pushing my investigation still further I learn that these symptoms have not lasted a week; that, in fact, one week ago he was very active and was jumping from the sofa, when he fell, striking his head directly against the floor—the fall producing a little concussion of the brain, but that he rested well that night and did not manifest any symptoms whatever until the third morning, when he got out of bed holding the head awkwardly, and complaining of pain on moving about. Since that morning he has been resting poorly nights, and his cervical stiffness has rather increased. In view of this severe fall, then, with the above facts in view, I am on the point of excluding any bone disease in making up my diagnosis, and of attributing the whole difficulty to a muscular or ligamentous strain, relief from which will speedily follow after rest and counter-irritation; but on attempting, by way of routine, to explore the posterior wall of the pharynx with my finger, the little fellow sets up violent resistance, and begins coughing rather spasmodically. The father now informs me that he is just getting over whooping-cough, which has already lasted two months. With this additional fact, I interpret the fall as a concussion of one or more of the vertebral bodies, the nutrition of which has been impaired by the whooping-cough in such a way as to render them peculiarly vulnerable. This was a most unfortunate time for such a traumatism, and I have little hesitancy in predicting for the little patient a bone disease with destructive changes. In the *Revue de Chirurgie*, No. 10, 1881, Paris, M. Ollier has very clearly shown how such strains or concussions produce cerebral and peripheral bone diseases, in an article entitled "De l'entorse juxta-épiphysaire, et de ses conséquences immédiates ou éloignées au point de vue de l'inflammation des os."

A little girl, aged eight, was admitted to the hospital for the relief of spinal caries with a large bosse and incomplete paraplegia. The father was reported as subject to asthma, but otherwise healthy and possessed of an excellent family history. The mother was likewise healthy and claimed a family history equally good. The patient herself was in fine health until three years of age, when she had an attack of measles from which she made a very slow recovery. It is reported that she caught cold and had a relapse, and during this relapse began to complain from time to time of pain in her back. That was the beginning of her spinal disease, and her condition on admission to the hospital five years later furnished abundant evidence that the disease had made dreadful ravage.

Take this case: A highly scrofulous looking boy, aged four, was brought to the out-door department of the hospital suffering from caries of the eleventh and twelfth dorsal and the first lumbar vertebræ. There was a bosse of at least a quarter of an inch in height, and an indisposition to extend the left thigh. This was explained by the presence of a psoas abscess lying deep in the iliac-fossa. The family history on both sides on careful search was found to be good, and the boy himself was a good specimen of health and vigor ten months before his appearance at the hospital. He had an attack of measles, followed by enlargement of the cervical glands and a phyctenular conjunctivitis resulting in corneal ulcers, cicatrices of which remain. He lapsed into a wretched condition of health, and while in this state a playfellow pushed him from the sidewalk one day so that he fell, striking his head against a stone, a deep lacerated wound resulting. This wound seemed as though it would never heal. Two weeks after this severe fall he began to complain of pain in his back and to assume that gait and those attitudes so characteristic of vertebral ostitis.

From our case-books I have taken cases that have come under observation since the publication of my paper containing the statistics above mentioned. I have taken for analysis such as I find fully investigated and fully written up. In my former tables I took the trouble to personally examine every case from which data were drawn, and made special effort to trace out cases whose histories had been hurriedly passed over. Those tables I say represent labor that I am loath to repeat. They were based upon cases wherein I had obtained all that there was in the family histories in addition to the dates and severity of the exanthemata. In this supplementary report I am about to make I have not taken the trouble to separate those cases with clear family records from those wherein heredity undoubtedly plays a prominent part.

I shall be able to show only that the exanthemata occurring in a child with a strumous diathesis, either dominant or latent, render the child additionally vulnerable to the development of bone disease. So far as my own impressions go, I am fully warranted in saying that many of these cases have had the strumous diathesis engendered by these diseases of which we speak.

In 48 well-marked cases of spinal caries the first symptoms of disease appeared in 13 during convalescence from measles, and in 4 prior to the occurrence of measles, all 4 of which were aggravated by this exanthem. Three of the 48 presented their first signs in the wake of a whooping-cough, 1 came on soon after a scarlatina, and 2 after a prolonged cholera infantum.

Of 118 cases of hip disease, 13 began within a few weeks after measles, and 3 were attributable to this disease; 9 were traced to whooping-cough in its final stage, 5 to scarlatina, and 1 to cholera infantum.

In 49 cases of articular ostitis of the knee (known as white swelling), the relationship of the early stage and of the infantile disease under consideration was so close, as regards time, that measles was held accountable for 7, whooping-cough for 2, and scarlatina for 2.

Four out of 23 cases of caries of the ankles were traced to measles or the condition of health which measles left, and 3 were traced to whooping-cough. To sum up: I feel fully warranted in ascribing 37 cases of bone disease, out of 238 analyzed, to measles, 17 to whooping-cough, 7 to scarlatina, and 4 to cholera infantum.

These statistics but confirm, however, the statements made by nearly all writers on diseases of children. They all admit that in some mysterious way or other measles often take a conspicuous part in the evolution of a strumous or a tuberculous diathesis. This can be easily proved, and the new statistics just recorded go toward establishing this point; and I am fully impressed with the importance of establishing this point beyond peradventure. I know that the tendency is to make light of measles especially, and there be many who claim that this is a harmless, aye, a salutary disease. It pains me much to see in the abbreviated report of the proceedings

of the Medical Society of the State of Pennsylvania, as published in the RECORD, No. 20, p. 549, of present year, the following from a man who occupies an exalted position in his profession: "Dr. Traill Green, of Easton, read a paper upon the importance of physicians exerting themselves to allay the unnecessary fear of disease which was common among the laity. Infantile diseases, he thought, were greatly overrated in their danger, and he leaned to the opinion that they were rather beneficial than otherwise."

I sincerely hope that this may be an incorrect report, and that my quotation may be the means of bringing out the more conspicuously a disclaimer of such views, though I am ready to grant that Dr. Green has good authority for making such statements, but the authorities I refer to are given in Thomas's article in "Ziemssen's Cyclopædia":* "Should measles, on the other hand, appear during a disease to which they do not usually give rise, they may favorably influence the course of the latter." He quotes Behrend as having seen eczema of the scalp in a woman, of three years' standing, disappear permanently after measles. "Barthez and Rilliet saw chorea, epilepsy, and incontinence of urine of several months' standing cured by measles. Weisse reports measles in the case of a girl suffering from convulsions entirely remove the disease." "Feith and Schröder Van der Kolk report the case of a woman who, for five years, had been in an insane asylum with violent attacks of mania, which did not return after measles, and the woman was soon well enough to be discharged." "*Rilliet found that a chronic coxitis improved noticeably after measles.*" Now these quotations are from an eminently consoling page in Ziemssen, and yet I have not given the entire page. I have italicized this last item because I find in it a key to some, at least, of the good results reported. Chronic joint disease is especially a disease of exacerbations, and it is very easy for one not familiar with this fact in the natural history of such affections to interpret a *post hoc* as a *propter hoc*. It is also well known to neurologists that epilepsy and allied diseases are arrested spontaneously anywhere between the age of childhood and the age of puberty. Furthermore, eczematous eruptions are classed among the sequels of measles. I can readily believe that, occasionally, any acute disease, occurring in the course of a chronic one, will prove beneficial to the other, but I am far from believing this to be anything more than an exception to a pretty universal rule. The exanthemata of cities differ, I am led to believe, very much from those of the country, and epidemics differ, too, very materially in their severity.

Trousseau says: "In an epidemic which I observed at the Necker Hospital in the years 1845 and 1846, out of twenty-four children who had measles, twenty-two died of peri-pneumonic catarrh; the other two escaped this terrible complication. This statistical fact enables you to estimate the frightful severity of this affection . . . . . and the physician who considers measles a mild disease till he encounters one of these epidemics, will afterward modify that opinion." †

Dr. Chadbourne, in the *American Journal of Obstetrics and Diseases of Women and Children*, for October, 1880, reports an epidemic of measles which prevailed in the New York Foundling Asylum in the spring of that year. There were forty-eight deaths in three hundred cases, twenty children dying of capillary bronchitis, broncho-pneumonia, and œdema pulmonum. Twenty died from convulsions.

Dr. Raymond, of Brooklyn, presented last year a report based upon the returns to the Brooklyn Board of Health, and his article was thus significantly headed: "Measles not a Trivial Disease." It is published in the "Proceedings of the Medical Society of the County of Kings," and is a very instructive contribution. Even in the limited number of cases of measles reported to the Board of Health of that city, in one year there were fifty-nine deaths from complications. Of lesions pertaining to the nervous system, six died of meningitis and hydrocephalus, thirteen of convulsions, and two of congestion of the brain. Respecting the pulmonary system, three died of congestion of the lungs, one of pulmonary apoplexy, eighteen of pneumonia, and five of laryngitis. Two died of dysentery. Very few days pass in the out-door department of the hospital that some one of our continued patients does not appear, after a long absence, with the excuse that the delay has been caused by the intercurrence of a measles, a whooping-cough, or a scarlatina, followed by a very slow recovery. In the majority of instances I find that the bone disease has been aggravated, and added to this there is frequently a broncho-pneumonia, an otitis, a naso-pharyngeal catarrh, or an anæmia that the best preparations of iron fail to reach.

To conclude these remarks I have collected twenty-four cases of chronic bone disease in children, twenty-one of whom were under ten years of age, and all under thirteen. All these have recently passed through an attack of measles. On a close analysis I find that twelve, or one-half, came out of the intercurrent disease in a worse condition; that is, the chronic ailments from which they suffered were materially aggravated; eleven were unaffected and one seemed to be a little better, but just how long this improved condition will last I cannot say: suffice it to remark, however, that the patient under consideration has a subacute blepharitis as a sequel to the measles, and I am not sure but that her struma is accentuated. The complications in the twenty-four cases I am now reviewing were: catarrhal conjunctivitis in three, bronchitis of an aggravated type in two, laryngitis in one, broncho-pneumonia in one, dysentery in one, and a severe otalgia in one. The sequels were conjunctivitis in three, an exaggeration of the strumous diathesis in four, an ulcerated stomatitis in one, a naso-pharyngeal catarrh in one, and a persisting anæmia in two.

The questions, then, in this communication I should like to have discussed by the members of the society, are:

1. Do nervous diseases, and especially epilepsy and allied convulsive affections, disappear by reason of an attack of measles? That is, can we reasonably expect that an epileptic will be cured, or materially benefited even, by the intercurrence of measles? I propound this question because of the quotations I have made from Thomas's article in Ziemssen.

2. Does the disease itself or do the complications induce the sequels which are often so disastrous to health?

3. Can the disease or the complications be so managed as to prevent or even to materially modify the grave sequels with which we are familiar?

4. The feasibility and the advisability of inoculation as a preventive of this formidable exanthem.

* William Wood & Co., NewYork, vol. ii., p. 105.
† Clinical Medicine. Philadelphia, 1873; vol. i., p. 181.

Dr. Reese presented to the Alabama Medical Association, in 1880, a paper entitled, "Inoculation in Measles probably the best means to prevent serious results." I regret my inability to consult this article.

In the present communication I have endeavored to contribute a mite at least toward the establishment of the following propositions:

I. Measles is not by any means "a trivial disease." *

II. Measles, and indeed any of the exanthemata, with whooping-cough especially included, are to be dreaded in patients suffering from the chronic bone and joint diseases commonly known as scrofulous.

III. Measles and whooping-cough take precedence among all the diseases of infancy and childhood in the evolution of a hereditary strumous diathesis.

IV. A strumous diathesis may be *caused* by an attack of measles or of whooping-cough in a child whose family history, both paternal and maternal, is absolutely free from hereditary diseases.

A CASE OF HEMIPLEGIA,

ILLUSTRATING THE CONNECTION OF DESCENDING DEGENERATION AND ATROPHY OF THE ANTERIOR HORN OF THE SPINAL CORD.†

BY L. PUTZEL, M.D.,
NEUROLOGIST TO RANDALL'S ISLAND HOSPITAL.

THE following is the history of the case which I wish to present for your consideration this evening:

Henry Berg, aged forty-two, single, a native of Germany, seven years in this country, admitted to my wards on October 21, 1881. The family and past history cannot be obtained from the patient, as he is in a semi-stupid condition.

Present condition.—The patient is a man of moderate size, looks older than the age given above; he is markedly emaciated, and has a pale, haggard face. When spoken to, the expression of his face seldom shows that he comprehends what is said. The pupils are contracted and react slowly to light.

The patient has right hemiplegia, the paralysis being marked so far as the limbs are concerned. The face is not so deeply lined on the right side as on the left, and is slightly drawn toward the latter. When his face is contracted by an expression of pain, the right side moves less than the left; the tongue does not deviate on protrusion.

MEASUREMENTS OF THE LIMBS.

	Right.	Left.
Thigh	16 inches.	17 inches.
Leg	11¾ "	12½ "
Arm	9 "	9¼ "
Forearm	9 "	9½ "

The joints of the right side of the body are enlarged and tender on pressure, especially the metacarpophalangeal and phalangeal joints. There is rigid contraction of some of the muscles of the paralyzed leg, giving rise to distortion of the foot; the great toe is drawn upward by contraction of its extensor, as is also the little toe to a less extent. The tendo Achillis is also firmly contracted, giving rise to a talipes equinus.

The muscles of the scapular region, on the paralyzed side, are very much atrophied.

Sensation.—Tactile sensation is diminished on the right side of the body, with the exception of the tips of the fingers and the soles of the feet. There is marked analgesia over the whole of the right side.

Reflexes.—Cutaneous reflex is still perceptible in the sole of the right foot, though not so marked as in the left. The patellar tendon reflex is very much exaggerated on the right side, and is absent on the left. The reflex from the tendon of the triceps is present on both sides, being most marked on the left. The other tendons failed to respond.

Electrical reactions of the muscles are similar on the two sides of the body, with the exception of the muscles on the posterior aspect of the right forearm and the anterior aspect of the right leg, in which the atrophy is extensive. In these groups of muscles, the reactions to both currents are so slight as to be scarcely appreciable.

When the patient reads, he mispronounces all the words, but appears to understand spoken language; when given a simple direction in writing he does not get its drift. If told to repeat "Ich bin krank," he says "Ich krank." When asked his age, he is unable to tell it, but writes 45; when asked how long he has been sick, he also writes 45, and says, "Berg"; when asked whether he was born in Germany, he writes: "gebor in," "Gebor in." If asked to give his native place, he says, "Ich kann es nicht" and strikes the top of his head. As far as could be ascertained, his illness had lasted between one and two years.

Physical examination of chest: Inspection.—The whole right side moves less on inspiration than the left; the intercostal spaces are depressed.

Palpation.—Vocal fremitus is increased in the left infraclavicular region.

Percussion.—A high-pitched note on the left side anteriorly; the examination otherwise unsatisfactory.

Auscultation.—On the left anterior aspect the inspiratory and expiratory murmurs are high-pitched, especially the latter; the breathing is tubular in quality; no râles. At the right apex, the respiratory murmur is shorter, high-pitched, and tubular in character; bronchophony. Respiration feeble and distant over remaining portion of right lung.

Heart.—Apex beat in fifth interspace, midway between the median line and the left nipple. A very loud and blowing systolic murmur is heard at the apex, and is transmitted over the entire chest.

The patient has a somewhat annoying cough, but expectorates little; appetite poor. He has had diarrhœa constantly since admission, and, for the greater part of the time, has passed urine and fæces in bed. Yesterday his rectum prolapsed, and has been down ever since. He is very weak to-day, and death is impending. Patient died October 28th, one week after admission.

The *diagnosis* lay between embolism of the left middle cerebral artery, followed by descending degeneration of the lateral tract, associated with atrophy of the right anterior horn of the spinal cord, and cerebral hemorrhage. Although the previous history could not be obtained, I leaned strongly toward the diagnosis of embolism, on account of the combination of aphasia, right hemiplegia, and the evidences of cardiac disease.

Anatomical diagnosis. — Pachymeningitis cerebralis, embolism of left middle cerebral artery, with atrophy of parts supplied by it, descending degeneration, atrophy of right anterior horn of spinal cord. Endocarditis of aortic and mitral valves, cardiac

* I would again call attention to the value of Dr. Raymond's paper as establishing this proposition.

† Read before the Section on Theory and Practice of Medicine of the N. Y. Academy of Medicine, May 16, 1882.

hypertrophy. Emphysema and brown induration; old infarctions. Chronic diffuse nephritis.

The *autopsy* was made twelve hours after death.

Head.—Calvarium thickened; dura mater adherent to the bones over their entire extent. Pachymeningitis of the convexity most marked on the left side; the new membrane contains a blackish red clot, about one-fourth inch thick on the left side. Marked pachymeningitis in the three fossæ of the left side, slight in right posterior fossa. The pia mater is thickened over the convexity and opaque. There is atrophy of the entire left hemisphere (left hemisphere, two and three-fourths inches; right hemisphere, three and one-fourth inches at widest part). The right occipital lobe projects backward a little farther than the left; all the convolutions are smaller on the left side than on the right. The right hemisphere of the cerebellum is two inches, the left hemisphere two and three-eighths inches wide. The right temporo-sphenoidal lobe projects about one inch beyond the left, anteriorly. The first temporo-sphenoidal convolution and upper border of the second, the Island of Reil, the posterior tip of the third frontal, and the lowermost parts of the ascending convolutions on the left side are destroyed.

The basal ganglia on the left side are flattened; the optic thalamus is irregularly concave, and its posterior tip is one-half inch anterior to corresponding part of opposite side; it is also much narrower laterally. The corpus striatum does not extend as far forward as its fellow; about one-half inch from the tip of tail, the ganglion has disappeared entirely, leaving only the thickened ependyma between the lateral ventricle and Island of Reil. The lenticular nucleus is entirely destroyed, except a small portion anteriorly.

The left middle cerebral artery contains a white, fibrous plug, occluding it immediately at its bifurcation. The following appearances are presented upon the inferior aspect of the brain: Flattening of the left optic nerve and atrophy of the left optic tract. Marked atrophy of the left crus, the degeneration affecting chiefly the fibres of the middle third; atrophy of pons varolii on the left side. The left anterior column, immediately after its exit from the pons, presents a gravish color, and is only about half as broad as the right column. Atrophy of left corpora quadrigemina, most marked anteriorly.

Spinal cord.—The dura mater is adherent anteriorly to the pia mater. There is atrophy of the entire right half of the cord. On close inspection the right anterior horn was seen to be decidedly smaller than the left; very distinct gray degeneration of the right lateral column, extending along the posterior horn and apparently outward to the cortex. The anterior column on the left side is smaller than on the right. Upon close inspection a rim of apparently normal cortical substance is found outside the degenerated lateral columns. These changes diminish in extent in the dorsal region, but are still visible in the lumbar enlargement.

Heart.—Pericardium adherent; hypertrophy of both ventricles. Aortic valves thickened, their edges retracted and incurvated; the leaflets adherent to one another. Some of the chordæ tendineæ have been entirely destroyed, others thickened and softened. Mitral valve remarkably thickened and retracted; on its auricular surface is a vegetation one-third of an inch long.

Lungs.—Old adhesions anteriorly. Left lung emphysematous, especially at apex; apparently brown induration throughout; recent pneumonia of lower lobe. Old infarction in anterior tip of right upper lobe; right lower lobe in same condition as left.

Spleen.—Normal size, capsule thickened, remains of two old infarctions.

Liver.—Diminished in size, surface slightly granular; increase of interstitial tissue; small calculi in gall bladder.

Kidneys.—Chronic diffuse nephritis, remains of a few old infarctions.

Joints.—Some were opened, but nothing abnormal was found.

The following report has been kindly furnished me by Dr. William H. Welch, to whom the specimens were referred for examination:

"The specimen consists of the pons, medulla oblongata, and spinal cord, hardened in Müller's fluid. The anterior pyramid of the medulla oblongata upon the left side is markedly atrophied. Upon this side the anterior pyramid measures 3 mm. in width, whereas upon the right side it measures 5 mm.

"The spinal cord is the seat of well-marked secondary descending degeneration. The anterior column of the left side is distinctly smaller than that of the right side. The right lateral column is smaller than the corresponding column of the opposite side. The degenerated parts can be detected in the hardened specimen by presenting a lighter color than the rest of the white matter, although this contrast in color is less striking than is usual in cases of equally advanced degeneration. There is thus seen to be a narrow band of gray degeneration occupying the column of Türck in the left anterior column, and a larger, wedge-shaped patch of degeneration in the situation of the pyramidal fasciculus of the right lateral column, this latter degenerated patch not extending to the periphery of the cord. This descending degeneration can be traced throughout the cervical, dorsal, and most of the lumbar region. It gradually disappears in the lumbar region.

"The right anterior horn of the spinal cord is smaller than the left one. This difference in size is not great, although it is undoubtedly present. The difference is most marked in the cervical region, it can also be observed in the dorsal region, but in the lumbar region it is not distinct, although, even there, there seems to be a slight difference in size between the horns of the two sides.

"*Microscopical examination* shows the usual pathological changes of descending degeneration of Türck. In the posterior part of the right lateral column over a triangular patch close to the posterior horn, but not reaching the periphery of the cord, there is a marked increase of the neuroglia with atrophy and disappearance of the nerve-fibres. This degenerated patch stains deeply in carmine, and in hæmatoxylin and eosin. The neuroglia here has acquired a distinctly fibrillated texture and contains many stellate cells of Deiters. Only near the blood-vessels can the granular corpuscles of Gluge occasionally be seen. The nerve-fibres have in great part disappeared, those remaining being smaller than normal in diameter.

"There is a similar increase of neuroglia with atrophy of nerve-fibres in a narrow tract of the left anterior column bordering on the median fissure (degeneration of Türck's column).

"Careful comparison of the ganglion cells of the two anterior horns shows a considerable number of round, shrunken ganglion cells filled with yellow pigment particles, and with few or no processes in the right anterior horn. Here and there similar

atrophied cells can be detected in the left anterior horn, but on this side they are scanty and much fewer than on the opposite side. Careful enumeration of the ganglion cells of the two horns shows a diminution in the number of the right horn as compared with the left. This atrophy affects ganglion cells in all of the groups, and it is difficult to determine that it is more marked in one group than in another. This atrophy is not to be compared in degree or extent with that observed in cases of acute or chronic primary polio-myelitis. There are plenty of well-preserved ganglion cells in the right as well as in the left anterior horn, but that a moderate degree of atrophy of the ganglion cells of the right anterior horn exists cannot be doubted. No other change in the gray matter can be seen, notably no increase of neuroglia or of cells in the right anterior horn. The atrophy of ganglion cells is most evident in the cervical region, it can also be observed in the dorsal region, but in the lumbar region it is very slight."

Remarks.—This case presents several features of clinical and pathological interest, which appear to be dependent upon the atrophy of the right anterior horn of the spinal cord. This lesion of the gray matter appears to have been directly due to propagation by continuity from the sclerotic process in the lateral tract, and furnishes another proof, if such were necessary, of the continuance of the pyramidal track into the anterior horns. The presence of a few atrophied cells in the left anterior horn may perhaps be explained by a similar connection with the degenerated column of Türck.

In the first place, the electrical contractility of the extensors of the forearm and leg on the paralyzed side was so much diminished as to be scarcely perceptible. As a rule, the electrical contractility of the paralyzed muscles in hemiplegia is not at all affected, or very slightly, the muscular irritability being sometimes slightly increased, sometimes diminished. In the present instance, I think the diminution was out of proportion to the amount of muscular atrophy, and that it must be explained in part by the affection of the ganglion cells of the anterior horn.

The occurrence of enlargement and tenderness of the joints of the paralyzed limbs also possesses a certain amount of pathological interest in view of the statements of Charcot with regard to the morbid anatomy of arthropathies.

But the chief interest of the case attaches to the occurrence of well-marked atrophy of the paralyzed limbs in hemiplegia of cerebral origin. In this patient the circumference of the right thigh was one inch, that of the right forearm one-half inch less than that of the corresponding parts on the opposite side of the body. As you are well aware, ordinary cases of cerebral hemiplegia, with the exception of those occurring during childhood (in which I have often seen as well-marked atrophy as in acute infantile paralysis) may last for years without the supervention of atrophy in the paralyzed parts.

Eulenburg says: "Diseases of other parts of the brain (he had previously spoken of the medulla oblongata), so far as our present knowledge goes, do not lead, at least directly, to nutritive disturbances of the muscles. The large majority of true cerebral paralyses, even after their long continuance, are therefore not combined, as a rule, with any noticeable diminution in the size of the affected muscles."

Nothnagel says: "It is a very striking fact that the paralyzed limbs of hemiplegics, despite their occasionally complete immobility, do not emaciate after the lapse of years," Further on he adds: "In a few very rare cases early atrophy of the paralyzed muscles has been observed. Whether, as Bastian and Charcot consider probable, a spread of the secondary spinal degenerations to the gray anterior horn should be regarded as the cause, still requires further investigations, though the appearances in the case reported by Pitres speak in its favor."

Bouchard remarks that the gray matter always remains intact in secondary degeneration of the spinal cord.

Within the past decade attention has been called clinically to the relation of atrophy of the anterior horns of the spinal cord to systemic degeneration of the posterior columns, and also to primary sclerosis of the lateral columns. In a small number of these cases post-mortem demonstration of this connection has been obtained.

With regard to the class to which my case belongs, *i.e.*, atrophy of the paralyzed muscles, due to atrophy of the anterior horn, following secondary degeneration of the lateral tracts, very little has been determined clinically, and extremely few cases have been examined post-mortem. I have succeeded in obtaining from the literature of the subject histories of the following cases, of which I append short abstracts:

Pitres (*Arch. de Physiol.*, 1876, p. 657): A case of left hemiplegia; admitted to hospital in 1875. She had been paralyzed four years previously. During the period of late rigidity, marked atrophy occurred in the deltoid and some muscles of the hand on the paralyzed side. The electrical contractility was not examined. The autopsy revealed sclerosis of the left lateral column and destruction of cells in a limited area of the corresponding anterior horn of the cervical enlargement of the cord.

Charcot ("Leçons sur les Maladies du Système Nerveux," I., p. 62): A woman, aged seventy years. Left hemiplegia from cerebral hemorrhage. The paralyzed limbs, which soon became contractured, began to atrophy two months after the attack. This was accompanied by very marked diminution of electrical contractility. At the autopsy it was found that the descending sclerosis of the left lateral column had extended to the corresponding anterior gray horn, and had produced atrophy of a certain number of motor-cells.

Brissaud ("Revue Mensuelle," 1879, p. 625): A woman, aged sixty-eight years, came under observation in 1879. In 1870 she suddenly had an attack of left hemiplegia. The leg soon recovered almost entirely, but the arm became contractured. In 1872 she had a second attack, with loss of consciousness and inability to make herself understood for a month. She then began to suffer from intense paroxysmal pains in the back of the neck and the left shoulder, which have continued ever since. After a long time the right lower limb also gradually became paralyzed.

Position of the body: In dorsal decubitus, slightly inclined to the left side. The head is drawn toward the left shoulder, and slightly flexed anteriorly; the mouth is slightly drawn toward the right. The left arm is drawn toward the trunk; the forearm forms a right angle with the arm. This limb is entirely powerless. Both thighs are flexed upon the pelvis, and the legs upon the thighs.

The autopsy showed well-marked descending lateral degeneration, and atrophy of the left anterior horn with the exception of the lumbar region. In

the affected portions of the gray matter, the ganglion cells were shrunken and less in number than on the opposite side. They were granular, and did not stain readily in carmine.

It is a curious fact that although Brissaud's article treats of muscular atrophy in hemiplegia, no mention is made in his imperfect clinical history of the case of the presence of atrophy. But I infer from the context of his subsequent remarks that the muscular atrophy in this case affected chiefly the shoulder muscles.

Brissaud also reports the results of the microscopical examination of a cord, which revealed the same changes as in the case just quoted. But unfortunately he was unable to obtain a clinical history of the patient.

This author also gives the histories of three clinical cases (without post-mortems), from which it appears that contracture of the paralyzed side first develops and then disappears, the atrophy developing at the same time. As in my own case, contracture and muscular atrophy may be present concomitantly.

Since writing the above paper I have met with a clinical case which undoubtedly belongs to the same category as the one described above. The following is the history of this patient: J. B., aged thirty-eight years, a driver; his mother had "fainting spells" when young; a cousin on the father's side had chorea; the patient and one of his sisters had chorea during childhood; he states that all his sisters and himself have had "spasms" when frightened or angry; he was semi-conscious during these spasms. The patient had a severe attack of acute articular rheumatism at the age of twelve or thirteen years; a second milder attack at the age of sixteen years; he has had shortness of breath as long as he can remember; was a hard drinker formerly. Has suffered since childhood from severe headaches, occurring every week and lasting usually twenty-four hours (mother and sisters are also troubled with severe headaches). Last December the patient went to bed about twelve o'clock at night, feeling well, and at about two o'clock A.M. found himself upon the floor; he had had a dream in which he imagined that he fell from a hearse; he wet the bed at the time of the seizure. The patient was unable to rise from the floor because his entire left side was paralyzed; he was delirious for a couple of hours after the attack. For two weeks he was unable to hold his water, passing a small quantity every few minutes. A few days later he began to exhibit a tendency to laugh and cry without cause, and this has continued ever since, to a less extent. Within two or three weeks after the attack he began to walk, and improved quite rapidly in this respect. The arm has remained entirely powerless, but the limb moves involuntarily when the patient gapes; about four months ago he began to have pain in the left shoulder, and this has persisted.

Present condition.—The patient is a well-nourished man with an intelligent expression of countenance. The lines on the left side of the face are not quite as pronounced as on the right side; slight paresis of left side of face. No disturbance of the special senses; the tongue is freely movable and protrudes in a straight line. The left arm is carried in a sling; he presents the typical hemiplegic gait.

The apex beat of the heart is felt about an inch to the left of the mammary line; a systolic murmur, which is transmitted upward, is heard at the base; the pulse is feeble and irregular. There is absolute loss of motion in the left upper limb, with the exception of a slight power of drawing the limb backward; there is rigidity of this limb, most marked at the shoulder, but the patient thinks that this feature is less marked now than a month ago. The wife of the patient states that the arm has been wasting away for the last six weeks. Upon inspection all the muscles around the left shoulder are seen to be considerably atrophied, especially the deltoid. The following are the measurements of the upper limbs: Right arm, 10 inches; left arm, 9 inches; right forearm, 9¾ inches; left forearm, 9 inches.

Slight tenderness of the shoulder-joint is experienced upon pressure against the head of the humerus (the tenderness is considerably less now than formerly) and upon attempting voluntary motion.

The mechanical irritability of all the muscles of the left arm is very decidedly exaggerated; upon tapping them smartly in any part of the limb, they immediately contract vigorously, starting out in bold relief. The tendon reflexes at the elbow and wrist joints are also considerably increased when compared with the other arm. The left fingers are stiff and slightly flexed in the palm; there is slight flexion at the wrist, and, to a trifling extent, at the elbow; the arm cannot be raised passively at the shoulder on account of the severe pain produced when it is a little removed from the trunk.

Tactile sensation appears to be alike in both upper extremities; the farado-cutaneous sensibility of the left forearm is diminished; considerable diminution of farado-muscular excitability of left arm compared with right.

The lower limbs appear to be of equal size; there is slight rigidity of the left leg and the left patellar tendon reflex is slightly exaggerated; the power in this limb has been almost completely restored.

Remarks.—The early age at which the attack occurred, the presence of organic heart disease, and the rapidity in the restoration of motion in the lower limb point to embolism (right middle cerebral) as the cause of the disease. In addition, descending degeneration of the left pyramidal tract and atrophy of ganglion cells in the right anterior horn of the cervical portion of the spinal cord are also probably present. The former is indicated by the muscular rigidity and exaggerated tendon reflexes, the latter by the rapid and considerable atrophy of the muscles of the arm (a little more than three months after the attack) and the diminution of farado-muscular contractility. The diminution of the rigidity of the upper limb after the beginning of atrophy is corroborative of the similar statement made by Brissaud.

BATHS FOR THE NEWLY BORN.—Dr. F. Winckel, of Dresden (*Centralb. f. Gynäkol.*, January 7, 1882), makes the novel suggestion of keeping certain newly born children permanently in warm water. This he considers more useful than rolling them in cotton-wool, applying warm bottles, and keeping them in warm rooms. The following abnormal conditions are mentioned as being suitable for the permanent bath: 1. Children born between the twenty-eighth and thirty-sixth weeks. 2. Children born asphyxiated and weak from flooding during labor, or who have accidentally lost blood from the stump of the cord. 3. Where there is disease or fretting of the skin. 4. In emaciation, to prevent bed-sores. The author has employed this treatment successfully in cases such as those above mentioned, and gives details of temperatures and results.—*Glasgow Medical Journal*, March, 1882.

FRACTURE OF THE PATELLA, TREATED BY WIRING THE FRAGMENTS.

An Unsuccessful Case.

By JOHN A. WYETH, M.D.,

ONE OF THE SURGEONS TO MOUNT SINAI HOSPITAL; CONSULTING SURGEON TO ST. ELIZABETH HOSPITAL, NEW YORK.

The operation which is the subject of this article, though not new, has under the influence of latter-day antiseptic surgery been resurrected, successfully practised, and the successful cases have pretty generally been published. I regret that I have to add to the list a signal failure by myself, and I wish it to obtain the widest publicity.

On September 11, 1881, a young woman, aged twenty, German by nativity, and unmarried, was admitted to Mount Sinai Hospital. Ten days previously, during a storm at sea, she had been thrown against the guard-rail, striking her left patella, and fracturing it while the leg was in strong flexion. A splint was applied soon afterward by the ship's surgeon, and she remained in the steerage for ten days, until she was landed in New York City. On the following day, September 11th, I first saw her. The notes of her case were taken by the House Surgeon, Dr. R. M. Cramer, to whom I am much indebted. The knee-joint and the entire leg and foot were greatly swollen. There were two large ulcerations on the posterior aspect of the knee and leg, and several dark spots over the sides and front of the leg capped by dark-colored blisters. The fragments were widely separated, although, owing to the swollen condition of the member, the exact amount of displacement could not be determined. The adjustment of any apparatus was for the present impossible. She was put to bed, the leg elevated, and constant warm-water dressings ordered.

The case gave me great concern. It was evident that the ulcers would not allow any of the ordinary mechanical appliances for the treatment of fractured patella. It would be several weeks before they could be sufficiently healed, even if the reparative power of the patient were good (which subsequent unfortunate results proved not to be the case).

I knew that recovery, if left to nature, would leave her unfit for work for at least a year; that with a ligamentous union of considerable length, she would have a limp for many years, if not throughout life, and would be in constant danger of a reseparation of the fragments. She was young, unmarried, without help, and dependent upon her labor for the means of existence.

I had known of five cases which had been treated antiseptically by the heroic measure of cutting down on the fragments and wiring them together. All had recovered and all were gratifying successes. These cases will be given with others hereafter. I had never heard or read of an unsuccessful result in a patella which had been wired under antiseptic precautions.

Her general condition seemed favorable. Appetite good, urine normal, and no lesion anywhere excepting in the injured leg. I determined to do this comparatively new operation, explaining fully the dangers it involved, and equally fully the benefits I hoped to derive from it for her. It was accepted in full. By September 21st, the swelling in the foot, lower leg, and thigh were reduced to the same size as the corresponding extremity. The knee was still swollen, though much less so than when admitted, but the ulcers over the ham and popliteal space were not improved. In order to insure the fullest antiseptic aid, I used two steam spray machines, so that if an accident should occur to one, the other would prevent any possible infection. They both ran uninterruptedly during the operation. The sponges were fresh and carbolized, and every instrument was flooded with five per cent. carbolic solution. The assistants were disinfected. After the patient was anæsthetized the ulcers were mopped out with chloride of zinc, and the leg washed with five per cent. carbolic solution, and the spray started. A transverse incision was made over the line of separation, and two short cuts perpendicular to this at the points where the fragments were to be wired. A clot of blood occupied the interval between the fragments, and extended beneath into the joint. The separation was more than one inch. Both broken surfaces were scraped thoroughly, and two holes were drilled through the upper segment. The lower was so narrow, being a mere rim of bone hanging on to the upper end of the ligamentum patellæ, that I passed the wires underneath this through the fibres of the ligament. All hemorrhage was stopped, the joint cleanly irrigated with a five per cent. carbolic solution, two drainage-tubes of one-fourth inch calibre were inserted, one on each side of the joint, and the wires were tightened, bringing the fragments in close apposition. The wounds were closed with catgut sutures and a Lister dressing applied. The patient rallied well from the ether. This was September 21st. On the 23d she complained of pain in the knee, foot, and bowels, and during the night had a stool which contained blood. On September 24th the dressings were changed under spray. The wound had an angry and threatening appearance. A few drops of pus escaped from the tubes. The wound was washed and the joint irrigated with three per cent. carbolic solution. Temperature to-day averaged 101¼. Ordered ℞ xv. Magendie, in two doses. 26th, More comfortable. 27th, Constant tenesmus. Quinia, gr. xx., daily.

Wound dressed daily and discharge increasing. Diarrhœa severe and annoying. Opium in full doses. Temperature 102°.

October 9th.—More pus than at any other previous dressing; carbolic solution (three per cent.) injected into the tubes came out through the old ulcers on the back of the leg, showing that these had opened into the joint. Free incisions were made laterally and posteriorly on account of burrowing pus, two large tubes passed through the joint antero-posteriorly, and one transversely, which went beneath the patella. One hour and a half after this operation the temperature rose to 104; pulse 130, and thready. From date of operation to October 9th temperature has ranged from 101 to 103. On October 9th the temperature reached 105, and the pulse was 160.

October 10th.—The highest temperature (always taken in the rectum) was 102, and the lowest 98⅗.

From October 12th to November 1st temperature ranged from 99¼ to 102—once or twice reaching 103, and always highest in the evening. The diarrhœa continued incessantly, there being from four to ten discharges a day. Quinia and iron were given constantly. The joint continued to discharge a quantity of badly smelling pus, and later in November several incisions had to be made.

December 1st.—It was evident to me that the disintegration of the joint was complete, and I determined to amputate the thigh as a last resort to save the unfortunate patient's life. The operation was

postponed on account of erysipelas, which attacked the leg during the night. The temperature rose to 105¼, and pulse 160.

December 2d.—The temperature was 100 at 8 A.M., and 100⅖ at 8 P.M. Milk and whiskey every two hours, beef-tea every hour, and quinia gr. xv. daily. Her condition slightly improved from this time to December 16th, when I amputated the thigh at its middle. The erysipelas migrans was still present in a mild form. An abscess had formed on the instep of her left (lame) foot, and two others on the thigh—one in the groin and one over the trochanter. It seemed desperate to amputate under such conditions, but death without it was inevitable. Lateral transfixion flaps were made. On sewing through the femur it was found to be full of pus at the point of section (the lower third). The flaps were split up and the bone again divided in its middle, where it was sound. Chloroform was used. The operation lasted twenty minutes. The flaps were kept wide apart and a constant irrigation immediately commenced. Everything was prepared for transfusion, but happily there was no hemorrhage, and the patient rallied slowly but steadily. Six hours after the operation her temperature was 99, pulse 130.

At 8 A.M. the next day, December 17th, temperature, 100¾. During the night ℥ ij. of brandy and ℥ j. beef-tea were given by mouth and one hypodermic of brandy. At 1 P.M. patient had a chill, and at half-past two o'clock the thermometer registered 103⅗ in the rectum; pulse, 140. During the day and night ℥ viij. milk, ℥ iij. of beef-tea, and gr. xxviij. of quinia were taken.

December 18th, 19th, and 20th, and during the remainder of this month the temperature gradually declined until it reached the normal standard by January, 1882, since which time it has so remained. Nourishment was carefully given. The flaps were under a constant irrigation of one per cent. carbolic acid solution for three weeks. There was no sloughing and no perceptible process of granulation in this period. After this the irrigation was discontinued, and the raw surfaces were sprinkled daily with powdered iodoform. At this writing, May, 1882, the stump has healed beautifully and the patient is well.

I have given this case in detail because it is practically a new operation, and because it was a failure. Up to this date no other failure has been reported, which is a pity.

It may be said in extenuation of any failure that fracture of the patella is not free from danger when treated by other means than invasion of the joint. A patient died some years ago in a London hospital in which Malgaigne's hooks were being used, erysipelas having attacked the knee (London *Lancet*, November 22, 1879).

In the *Gazette des Hôpitaux*, October 27, 1881, a case is reported by Richet which was treated by an elastic bandage and an immovable dressing. Erysipelas attacked the patient, commencing in a slight abrasion caused by the apparatus over the spine of the tibia, and the man died.

It may be further said in justification of any operation so severe as the invasion of the knee-joint is deemed to be, that recent surgical literature is full of heroic procedures upon this joint, and no failures are recorded. Possibly there were none—probably there were. In one journal (the *Gazette des Hôpitaux* for 1881) Dr. Jules Backel, of Strasburg, reports eight cases in which he opened into the joint and in which drainage was established. All recovered, and five of these with perfect motion. My colleague, Dr. Gerster, has operated on two cases recently in this manner, both with success. In addition to these, I have learned of other cases which cannot be without interest in this connection. Dr. William T. Bull, surgeon to the Chambers Street Hospital, New York, kindly allowed me to publish this case from the records of the hospital:

Adam Schuff, aged fifty-one, a porter, admitted January 31, 1878. While clearing snow from a skylight, two inches in thickness, the glass broke and the right leg slipped through to a little above the knee. A flap 2×3 inches was torn up from the front of the knee to such an extent that the ligamentum patellæ was completely severed, and the lateral attachments so torn that a finger could be passed into the joint on either side of the patella. A second wound on the outer side also communicated with the joint. Hemorrhage was severe but shock slight. Three articular arteries were tied and the cavity irrigated with strong carbolic solution. Under spray, the ends of the ligamentum patellæ were reunited with silver-wire sutures. Four drainage-tubes inserted.

February 1.—Dressing changed under strict antisepsis.

February 3d.—Flap was swollen and threatening.

February 5th.—Flap was sloughing.

February 17th.—Last drain was removed.

February 23d.—A plaster splint applied.

March 12th.—Plaster splint was removed. Joint still swollen. Slight passive motion.

March 14th.—Pus cavity above joint opened. The bone became necrotic after this, and on September 1, 1878, the patella was removed.

March 1, 1879, patient presented himself. *He has a new patella and can bend his knee at a right angle.*

This was a splendid result after such an injury.

In the *Lancet*, November 22, 1879, p. 767, Mr. Spencer Watson reports the case of a boy, ten years old, who received a penetrating wound of the knee-joint. Synovia escaped. A sinus resulted. Great pain and swelling. Later he opened the joint under Lister and secured free drainage. A splint and a dressing of carbolized lint were applied. Patient recovered with perfect motion.

In the same journal for 1879, p. 815, Mr. Macnamara reports two cases treated by drawing off the effusion into the joint with an aspirator, and dividing the tendon of the rectus in order the better to approximate the fragments. In one good union (seemingly bony) and perfect motion; in the second, in which both the tendon of the rectus and the ligamentum patellæ were divided, close fibrous union and a stiff knee. Patella, however, was movable over the joint.

Schede, of Berlin (*Centralblatt fur Chirurgie*, 1877, p. 657), reports a number of cases in which he had aspirated the joint after this fracture, drawn off the effusion, washed the cavity out with three per cent. carbolic until the liquid returned was clear (all under Lister), and then an adhesive-plaster apparatus was put on to approximate the fragments. If the effusion reoccurred, a second aspiration was performed.

The dressing is readjusted several times during the first few weeks. He claims that the three last cases so treated all recovered with bony union and perfect function. No accidents have followed in any of his cases treated this way.

As to the operation which is more particularly

the subject of this paper, viz., *wiring the fragments of a fractured patella together*, I have gleaned the following cases from personal sources and from publications:

About the year 1838, in the city of Philadelphia, Dr. George McClellan, a distinguished surgeon of his day, treated a fracture of the patella by making a longitudinal incision over the knee, exposing the fragments, drilling a hole or holes in each fragment and bringing them together by means of a soft iron-wire suture.

Prof. J. N. McDowell, afterward of St. Louis, who witnessed this operation, said: "Dr. McClellan's experiment was a success; the patient recovered with the only bony union I believe I have ever seen in this fracture; but, gentlemen, my advice is, don't you try the same experiment."*

This was McDowell's judgment on this operation, before the dawn of antiseptic surgery.

It is not stated whether this was a recent or old fracture, but I infer that it was recent.

Prof. Cooper, of San Francisco, California, writes to the London *Medical Times and Gazette* for November 2, 1861 (p. 467): "Our method of treating fractures of the patella is by exposing the fragments by a longtitudinal incision, drilling the holes slantingly through these, and bringing them into apposition by means of silver wires. By this method bony union always occurs. The wound is kept open by packing with lint, and the leg is tightly bandaged."

Cooper does not say how many he has treated in this way, but the inference is natural from his language that he had treated more than one, and that success had attended every case. I am unable to find that he published any unsuccessful cases.

Dr. John Rhea Barton in one instance connected the fragments together with silver wire, but lost his patient (Gross: "System of Surgery," p. 1004).

Dr. Moses Gunn, of Chicago, wired a fractured patella, and the patient died from exhaustion and suppuration.

Mr. Lombard, of Boston, sends me the record of the following case: Rebecca C——, aged twenty-seven, entered hospital March 6, 1865. One year previous she struck her left knee violently against the edge of a trunk, producing a transverse fracture of the patella. Much swelling and inflammation. Apparatus applied. On admission knee not swollen. Upper fragment quite small. Separation one inch and a half. Can be approximated readily. Patient "scrofulous."

March 8th.—Etherized—operator, Dr. S. Cabot. Transverse incision. The synovial membrane was cut and joint opened. Edges of fragments freshened. Silver wires passed through the ligamentum patellæ at its insertion into the lower fragment, going beneath both fragments and piercing the tendon of the rectus at its attachment to the upper fragment. The wires were tightened and twisted, bringing the fragments into apposition. The ends of the wire were left projecting from the wound. Considerable hemorrhage. Wound syringed. Adhesive-plaster dressings applied, wet compresses, and long straight splint. Except for slight erysipelas, which developed on the third day, and lasted five days, the knee itself did well, there being very little pain and swelling.

March 19th.—Almost all of wound has united.

April 16th.—No crepitus, slight discharge of laudable pus from outer side of knee.

May 7th.—On examination of chest, tubercular deposits discovered at apices of lungs.

May 27th.—A short incision was made in an attempt to remove wires, the ends of which broke and the remainder left in the wound.

June 14th.—Sinuses on each side of knee nearly closed.

June 16th.—Dextrine bandage.

June 18th.—Bandage slit up and sinuses examined. Probe passes three and a half inches up the inner side of thigh from opposite the knee-joint. Counter-opening. Oil-silk tent.

June 30th.—Tent removed. Knee normal size. Sinuses closed in from below.

July 9th.—Knee still continues to be painful. Patient objects to having it moved. Slight local swelling. Moderate discharge from counter-opening. Some slight motion in knee seen in lifting leg from the splint. General health apparently good. Cough diminishing.

July 13th.—Discharged well (?).

In a letter dated Oct. 19, 1865, Dr. Foster writes from the patient's residence at New Bedford: "Mrs. C—— died August 10, 1865, five months after the operation, and less than one month after she was last seen. All efforts to obtain an autopsy were futile. The region of the sacrum was covered with bed-sores. An abscess opened in right groin. Cough continued. Strength could not be maintained. Continued to complain of pain in the knee; could not bear to have it moved; wore splint to time of death.

These five cases were operated upon before the introduction of antiseptic surgery. Three died and two (at least) recovered. (I count only one case for Cooper.)

The cases to be given were done under antiseptic precautions, more or less rigorously enforced.

Mr. Royes Bell, on October 27, 1879, presented to the London Medical Society (see *Lancet*, 1879, p. 657) a man, a porter by occupation, who had received a transverse fracture of the patella on September 24, 1878. He had been treated by the "old method" at Yeovil Cottage Hospital by Dr. Aldridge for seven weeks, when he had been discharged with the fragments in close apposition and united by fibrous union.

February 1, 1879.—While in the act of stooping, under no extra weight, a rupture of the fibrous band occurred, and when Mr. Bell saw him in July there was a separation of two and one-half inches.

July 12th.—He cut down upon the fragments antiseptically, by a longitudinal incision, drilled the fragments and wired them together. The tendon of the rectus and some lateral attachments of the patella were divided and the fractured surfaces freshened. Drainage-tubes were inserted on each side of the joint, which were removed on August 6th, and slight passive motion begun.

September 27th.—The wires were removed with forcible motion under chloroform. The result was an apparent bony union and perfect free motion of the joint.

On November 17, 1879, Mr. Rose presented to the same society two cases of transverse fracture of the patella due to the muscular action which he had treated at the Royal Free Hospital by wiring the fragments.

Case I.—Female, aged thirty-two years; stout and full habit; admitted August 9th. Fracture occurred when she was in the act of trying to save herself from a fall. Rapid and excessive effusion into joint followed; separation two inches. Operation Au-

* Dr. W. A. Byrd, New York *Medical Journal*, May, 1876, p. 463.

gust 27th; strict antisepsis; longitudinal incision. A large quantity of dark clotted blood pressed out of joint. Thin slice pared from each fractured surface, and two holes drilled in each. Counter-openings on each side and horse-hair drains. Temperature never rose above 99° F. nor pulse over 90. Dressings changed eight times. Last thread of horse-hair removed on twentieth day, and wires in sixth week. Before the society on November 19th, the union was said to be bony, and the motion in the joint demonstrable, but as yet limited.

A second case by Mr. Rose, presented at the same time, and operated upon the same day as the preceding, was also a transverse fracture due to muscular action. The operation was similar in its details to the first. Bony union occurred, and the motion at the joint was perfect and very free.

In the *Lancet*, 1878, vol. ii., p. 144, is a synopsis of another case by H. Smith.

A sailor, twenty-two years of age, one year previously fractured his patella. Fifteen weeks later the fragments were more widely torn apart by a second accident. He could only walk by the aid of two canes and a knee-cap. Silver wires were used and strict Lister *modus operandi*. Tendon of rectus divided in order to adjust fragments. Horse-hair drainage; union *per primam*. No fever. Five weeks after operation, passive motion. Ninth week, patient can walk about and bend leg at angle of 45°. Fragments accurately in apposition.

H. C. Cameron, of Glasgow, has one case reported, viz., a transverse fracture of patella in which ligamentous union had occurred, and had been again separated by a second accident. Under spray the edges of the fragments were freshened, and silver wires used. No suppuration. Union not bony. Patient has a very useful limb (*Centralblatt für Chirurgie*, No. 7, 1879, p. 108).

At the seventh *Congress der Deutschen Gesellschaft für Chirurgie*, Trendelenberg reported a successful case. A seventeen-year old lad fell and broke his patella, which after six weeks was united by a ligamentous band, about an inch of separation existing. The edges of the broken bones were freshened and wired with silver sutures. "The result is very good and the extension of the limb is perfect" (*Centralblatt für Chirurgie*, No. 7, 1879, p. 600).

In the *Deutsche Medicinische Wochenschrift*, No. 17, 1878, p. 216, Uhde gives a brief report of another case.

A heavy man, twenty-one years of age, on November 10, 1877, sustained a transverse fracture of the patella by muscular action.

In January, 1878, reseparation—4 ctm.—by a second accident.

Operation February 25th. Edges scraped with a bone knife and sharp spoon; iron wire; five per cent. carbolic for toilet.

February 27th.—Dressings changed.

March 3d.—Union *per primam*.

April 9th.—Wires removed. The result was union of the broken bones. (Details fail, but I infer that the result was a restoration of function.)

On page 767 of the *Revue de Chirurgie*, for 1881, occurs the following: "Langenbeck—Fracture of the Patella—Metallic Sutures—Recovery with Motion."

In *Centralblatt für Chirurgie*, 1880, p. 240, Metzler adds a case: "Male, aged twenty-six; fell downstairs; upper large, lower small fragment; separation 2 ctm. Silk inter-osseous sutures; irrigation with carbolic solution. Recovered."

Prof. T. T. Sabine, of New York, operated upon a case of compound comminuted fracture of the patella, in which he wired a number of fragments together. The bones united, and the patient recovered with good motion of joint. (This case I am not at liberty to give in detail, as it will soon be reported to the New York Surgical Society.)

Mr. Lister operated upon two cases, which recovered. Silver-wire sutures were used.—*British Medical Journal*, December, 1877, p. 850; *Medical Gazette* (N. Y.), 1881, p. 330.

I am indebted to Dr. W. T. Bull, Surgeon to Chambers Street Hospital, for the following case: Mary Sweeny, domestic, aged twenty-five; admitted October 22, 1876. Had fallen downstairs and fractured right patella by direct violence. Treated by adhesive-plaster apparatus and posterior splint. December 17th, discharged cured. Fibrous union; one-fourth inch separation on outer, and one-half inch on inner side.

Readmitted October 17, 1878, on account of incapacity of leg, result of the old fracture. December 23d, a long incision was made under spray, the edges of the fragments pared and drawn together by iron wires. Lister dressings; one horse-hair and two drainage-tubes; posterior splint. Fourth day, pulse, 116; respiration, 32; temperature, 105°; no odor in wound. Seventh day, pulse, 108; respiration, 32; temperature, 98⅘; suppuration; joint syringed 1–20 carbolic. Twelfth day, the spray was discontinued at the dressings; carbolic compresses. Pulse, 120 to 140; temperature, 99°–101°. Later, complete disorganization of the joint occurred, and an abscess formed in the thigh. Patient died from exhaustion January 6, 1878. At the autopsy, there was no union of the fragments. Erosion of the cartilages had occurred, and adhesions between tibia and femur were established.

There are in all 19 cases given in this article: 5 without antiseptic treatment—3 of these died, 2 recovered; 14 with Listerism, more or less modified, and the result can be thus summarized:

1. Bell, "apparent bony union and free motion."
2. Rose, "said to be bony union; motion limited."
3. Rose, "bony union; motion perfect."
4. Smith, "accurately in apposition; knee bends at 45°."
5. Cameron, "not bony union; useful limb."
6. Treudelenberg, "result very good; extension perfect."
7. Uhde, "bony union, good result."
8. Langenbeck, "recovered with motion."
9. Metzler, "recovered."
10. Sabine, "bony union; good motion."
11 and 12. Lister, "recovered."
13. Bull, "died."
14. Wyeth, "suppuration; osteo-myelitis; amputation of thigh."

The result in some of these cases is left too much to conjecture. The reports in the journals are not explicit. Only one died out of the fourteen. One suffered the loss of a leg, and her life hung by a thread for many weeks.

In five other cases, bony union was supposed to have been obtained. I doubt this very much, since the supposition has not been confirmed by a post-mortem examination, and since in my own case the fragments were in close and perfect apposition, and had been so from September 21st to December 16th, and there was no osseous union. The remaining seven cases recovered. In one, as stated, "no bony union," and in the rest motion more or less limited.

After the study of these cases, and in the light of my own sad experience, I am led to conclude that the benefits to be derived from a close adaptation of the fragments are not great enough, as compared to the results obtained by Hamilton and others by safer methods, to justify the risk which experience has shown (despite the best known scientific precautions) is incurred by opening into the joint and wiring the fragments together.

This conclusion is almost analogous to that arrived at by Professor Frank H Hamilton, in the sixth edition of his classical work on "Fractures and Dislocations": "As to the method of cutting into the joint and wiring the fragments together under carbolic acid spray, I feel bound to say that as applied to a primary accident it is offering a very grave and dangerous substitute for other perfectly safe, and, so far as is yet proven, equally efficient methods; it is hazarding the life of the patient without offering any equivalent" (p. 516).

DIASTASIS OF THE CONDYLOID EPIPHYSIS OF THE FEMUR.

By DAVIS HALDERMAN, M.D.,
PROFESSOR OF SURGERY IN STARLING MEDICAL COLLEGE.

The victim of this injury was a mulatto male, eighteen years of age, of delicate organization, and apparently of so-called scrofulous or tubercular constitution.

The accident happened in connection with a runaway team attached to a scraper, wherein the patient was struck a powerful blow by the latter, over the front and lower part of the right thigh, felling him to the ground. Three hours afterward the patient was brought to St. Francis Hospital, Starling Medical College, and was taken for examination before the class of students. By this time there was great tumefaction about the knee, of a fluctuating character; the leg and foot were cold, and the *dorsalis pedis artery was pulseless*. Numbness, too, was complained of below the joint, while in the latter excruciating pains were experienced. The patient also suffered considerably from shock.

The limb on measurement was found to be two inches shortened. Owing to the swelling, the line of separation could be with difficulty made out, but it was finally located two inches above the articular plane in front; and the lower end of the shaft could be distinctly felt, directly beneath the integument, in the popliteal space, on a level with the anterior tibial tuberosity.

Efforts now were made with the aid of anæsthetics at adjustment, but without success; for, although the limb by means of extension and counter-extension, could be brought down to near its natural length, and the projection in the popliteal space be made somewhat to recede, the moment the efforts were relaxed, the displacement would recur. In view of this, and the crippled condition of the circulation, it was deemed advisable, for the time being at least, to place the patient in bed, with the limb slightly elevated, and in as comfortable position as possible, and await results. At the end of twenty-four hours the swelling had increased; some slight discoloration over the foot and leg had set in, but the temperature was somewhat improved; and while the shock had been for the most part recovered from, the pains about the joint still seemed out of proportion for injuries of this kind, and the dorsalis pedis artery remained pulseless, and so continued to the end.

It was now determined to place the limb in a flexed position upon a double inclined plane, with moderate extension, and see if by this means suffering might not be lessened. In its adjustment, the limb was brought down within one-half inch of the length of its fellow; but no weight sufficient to keep it there could be borne. The patient from this on felt easier, so far as the injured extremity alone was concerned. By next day, however, the second after the accident, considerable constitutional disturbance had supervened, pulse was 118, temperature 102°, and burning sensations, in the foot and under side of the leg, were experienced, while the toes and plantar aspects of the foot were dull on pinching and pricking. It was thus evident gangrene of these parts was threatening; but it was still thought the collateral circulation about the knee might arrest the morbid action below this point—a hope that was warranted by the natural warmth and sensibility over the upper part of the leg, and that was maintained to the last, which was three days later. Meantime, the discoloration below this point spread and deepened; flectenulæ finally formed over the lower, outer, and under part of the leg and ham; and at the latter place also quite an eschar, from the pressure of the end of the bone beneath the skin. The leg and foot at last became cold and insensible to deep pricking, except near the knee and along the inner aspect of the leg, corresponding to the course of the great saphenous nerve, which, save at its termination, remained intact. Accordingly, on the fifth day after the injury, the limb was removed at the inferior part of the middle third of the thigh, the damaged state of the tissues being such as to preclude amputation lower down.

Condition of Amputated Limb.—Dissection of the amputated limb revealed the tissues about the injury to have been badly damaged; the soft parts for some distance around being extensively lacerated and, in the immediate vicinity of the break, pulpified. Blood was widely extravasated up and down the limb, and filled the joint cavity through a rent from the injury on its inner side. The lower end of the femur was completely denuded of its covering—periosteum, muscle, etc., and lay bare amid the débris of the injury, as did also a mass of broken-off cancellous bone, about the size of the end of a man's thumb.

The detached epiphysis, still connected with the popliteus and gastrocnemius muscles, was tilted backward by their action, and at the same time was overlapped, at its posterior and outer aspect, by the shaft to the extent of several inches. Between them and on the anterior and inner aspect of the latter bone, lay the internal popliteal nerve, and the popliteal vein and artery, impinged upon by the fragments—that is, these parts, instead of being in their natural position behind the bone, had been displaced to the front of it and were held there by the hooked-shaped projection of the divided internal condyloid ridge over which they had caught, so that any effort at adjustment served only the more heavily to bear down upon and closely to embrace them and thus to cut off the circulation and innervation beyond. The artery was contused, and showed plainly the results of inflammatory action. Its walls were thickened, its interior roughened, and filled with clotted blood. The same held in regard to the vein, and the nerve, too, as concerned its pressure. The outer popliteal nerve, although still

sustaining its proper relation to the bone, was dragged down and also pressed upon heavily by the latter in its malposition.

It will thus be seen the circulation through the main artery and vein was greatly crippled, if not abolished, from the start; that both popliteal nerves were paralyzed from pressure; that the joint cavity was opened, and the surrounding tissue badly damaged; the bone comminuted; and all this, without a breach of integument, than which a worse state of complications cannot well be conceived, nor how it occurred from the single blow as above indicated. But the nature of this injury being essentially the same as that of a fracture of the bone from before downward and backward at this point, like the latter, owing to the great strength of the bone here, it can only occur from a degree of violence that must always occasion serious complications.

Said displacement of vessels and nerves is believed to be unique. How it occurred, without their rupture, would be difficult to explain.

Judging from the result of the post-mortem examination, it is of course plain that the limb should have been amputated at once; and it furnishes but another instance of the soundness of the doctrine in regard to the necessity of early amputation above the seat of the injury, when the circulation is badly crippled, as it was here, despite the achievements of conservative surgery, now and then, in cases of a similar kind.

The failure at reduction was evidently in a great measure owing to the drawing downward and backward of the proximal end of the epiphysial fragment through the action, whenever extension was made, of the aforesaid muscles attached thereto. The operation would doubtless have been facilitated had it been exercised with the leg partly flexed, as this position would have had the effect of relaxing these muscles. Still it is not believed, with the damaged state of the surrounding soft parts, and with the arthritic and vascular complications, that limb or life could have been saved, had even the adjustment been accomplished, though it is not likely, as concerned the above mentioned incarceration of the popliteal artery and vein, that any manœuvre or manipulation which might have been employed would have succeeded in freeing them.

After the amputation the patient did quite well for a while; at the end of the third week was able to sit up in his chair at times, and bade fair to make a good recovery, but afterward, unfortunately, was taken with pyæmia, of which he finally died on the thirtieth day after the amputation and the thirty-fifth after the receipt of the injury.

ON THE USE OF IPECACUANHA DURING LABOR.

By LEONARD F. PITKIN, M.D.,

NEWARK, N. J.

The value of ipecacuanha as an emetic and expectorant has been well known and appreciated for an indefinite period. About two years ago, my attention was drawn to an article written by a Southern physician, in which it was affirmed that it increased the expulsive power of the uterus if administered in cases of tedious labor. I determined to give it a trial. During September of last year I was called to attend Mrs. C—— during her confinement with her third child. She had had sharp pains for nearly four hours. I found her in a very nervous state, and greatly excited, and apprehending some calamity. On examination, introducing my finger into the vagina, I found the os hard, rigid, and undilated; with difficulty I passed my finger into the os, and just at its internal edge I noticed a constricting ring utterly devoid of elasticity. Her pains continued, but were very irregular; and after a period of two hours, no visible effect on the rigid os was noticeable. I then administered a five-grain powder of ipecacuanha, repeating it twice at intervals of about twenty minutes. To my surprise, the patient soon became much quieter, and ceased her cries of pain, which before were to be heard distinctly all over the house. On making another examination, I found the os softened and dilating rapidly under the pains, which were now regular and strong. Labor was soon completed without further difficulty. I have used it in several cases since, where the pains were irregular and the os rigid and undilatable, and always with benefit. I do not think it increases the muscular power of the uterus. It seems, however, to have a specific effect on the rigid os uteri, softening and relaxing its fibres, as well as a co-ordinating influence on the irregularly contracting uterine muscles, causing them to act in harmony. Opium and ergot are the only oxytoxics of value which we have at our command; but many serious accidents have followed the injudicious use of the latter, and its effects are often far from what we desire. Hence, the discovery of any remedy which will alleviate the sufferings which the parturient female has to undergo during protracted labor and hasten its favorable termination, will be heartily welcomed. I would much like to hear the experience of other physicians, whose obstetric practice will allow of their giving it a fair trial.

Tachycardia Due to Dyspepsia.—The *Prager Medicinische Wochenschrift* contains, in its numbers for April 12 and 19, 1882, a serial article by Dr. Adolph Ott upon the above subject. The histories of these cases embrace nothing of moment excepting acceleration of cardiac action, during digestion, and moderate meteorism. The heart-beats numbered from 100 to 160 per minute, and their intensity was frequently abnormally increased. These symptoms disappeared after regulation of the digestion. Tachycardia occurring under these conditions is generally referred either to irritation of the entire sympathetic system, of the splanchnic nerves, or of the excito-motor reflex centre through increased resistance in the peripheral vascular channels. Dr. Ott denies that irritation of the sympathetic or any part of it has any causative relation to tachycardia, because such irritation is uniformly attended by considerable increase of arterial pressure, which is absent in dyspeptic tachycardia. The absence of myosis also militates against the acceptance of the theory under discussion. Neither can tachycardia be explained by assuming an excitement of the excito-motor cardiac centre, since this also would result in augmented inter-arterial pressure, which we have seen to be lacking in the cases in question. Dr. Ott accordingly concludes that dyspeptic tachycardia is produced by diminution or destruction of vagus irritability—either through repeated slight irritation of the peripheral pneumogastric filaments in the stomach, or by pressure of the latter organ, when distended, upon the heart.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, June 3, 1882.

THE AMERICAN MEDICAL ASSOCIATION.

THE coming week will witness the meeting of the American Medical Association at St. Paul, Minn. It is quite probable that the number of delegates and permanent members will be equal to that present on similar occasions. The West will doubtless be best represented, while the delegates from the East will be comparatively few in number. It is fair to say, in any event, that the occasion will be one of usual enjoyment to all concerned. Certainly great pains have been taken to make the meeting a success both scientifically and socially. That the Committee of Arrangements will succeed better in the latter than the former goes without the saying. There will be no lack of excursions and other entertainments, and the delegates will have very substantial reasons for recollecting the hospitality of the profession in the far-off city of the Northwest. From present indications there will not be as much scientific work done in the different sections as formerly; still it is difficult to say beforehand how many papers will be presented at the last moment. It is to be deplored that, despite its widely representative character, the association falls so far short of its opportunities for advancing the true interests of progressive medicine. Contrasted with the British Association, it is far behind in the number and character of papers presented at its yearly gatherings. The reasons for this are various. In the first place, authors are forbidden to publish their papers save in the Transactions of the Association. This volume generally appears several months after the meeting, and is so filled with voluminous and uninteresting material that any good paper is apt to be lost sight of. Then, again, the volume has such a restricted circulation, among, at best, a few hundred members, that any valuable papers appearing in it are apt to be permanently buried.

Secondly.—The various State and local societies are absorbing the best talent over the country, and are constantly gleaning the riper and more available fruits of original investigation and practical experience. Medical men who are striving for reputation find it to their interest to begin with their work near home, within at least an easy range for consultation. This will probably explain why the British Medical Association can develop so much talent. Great Britain at best has but a limited area compared with this country, and consequently the whole kingdom is thoroughly farmed by the leading consultants of London, Dublin and Edinburgh. For this reason the real workers in the profession here concentrate their best efforts upon some one or more of their local societies, and trust to the wide publicity of the proceedings of these bodies in the different journals for not only a local but a general reputation. The American Medical Association, as at present constituted, can hardly be the representative scientific body of this country. With few exceptions, the best men cannot be induced to work for it as they should. Its meetings are too few and too widely scattered; its permanent membership is not constant or active enough to give it force, and only a very few, who take commendable pride in guiding the new members and delegates in the way they should go, attend the meetings regularly. With the majority of the members this is obviously impossible, as the distances for travel are generally very great, requiring the expenditure of much time and money, without a fair return in scientific benefit. But it is difficult to see how this can be remedied.

Thirdly.—The mistaken policy of the association, in restricting the publication of its papers to the annual volume of Transactions, has much to do with the interference of its usefulness. If it were not for the prompt publication of its proceedings by the medical press, the association would in all probability have ceased to exist long ago. With the advancing requirements for information, and with the keen appreciation of what is valuable in medical science, there is a bare chance of the association being left out in the cold, unless it shows more of a determination to move with the age, to command the best talent in its workers, and thus secure on the part of the profession generally a wider interest in its proceedings, and a proportionately greater respect for its influence.

SURGERY IN POMPEII.

A VERY interesting and remarkable collection of surgical instruments has been found in one of the houses in Pompeii. It evidently belonged to one practitioner or establishment, and formed quite as large an equipment as the modern surgeon is usually supplied with. A description of the collection, which is in the museum at Naples, has recently been given by a writer in the *Revue Médicale*. A number of instruments are classed together as obstetrical.

One of these is a pair of forceps constructed somewhat like the modern forceps, but with smaller blades, a little over eight inches long. They were intended apparently for the removal of the placenta. There is an ingenious vaginal syringe, consisting of a tube with terminal and lateral holes, so as to distribute the stream just as in modern syringes. There is also a trivalve speculum, so arranged that the three parts can be opened or shut simultaneously, and a bivalve, rectal speculum, made upon the same principle as those of the present day.

Male and female catheters were found. The former are eleven inches long, and have a curious double curve, something like a very long letter S. It must have been difficult to introduce them, but being once in, they are well calculated to empty the bladder thoroughly. The female catheters are straight, and made of silver.

There is a curious instrument, consisting of a long rod with a square plate of iron fixed at the end at an angle of 135°. The plate is about four-fifths of an inch long and three-fifths of an inch wide. It was at first thought to be a cautery for deep parts, but its surprising resemblance to the modern laryngeal mirror suggests that it may have had some such use in ancient times.

Besides the above instruments there were metallic trocars similar to modern ones, lancets, bistouries, spatulas, forceps, needles, hooks, and most of the things, indeed, which are found in the modern pocket-case.

Judging from the descriptions of the instruments, there was a large amount of obstetrical and urethral surgery in Pompeii. Lives of luxuriousness and sensuality brought their fruit then as now.

KOCH AT THE GERMAN CONGRESS FOR INTERNAL MEDICINE.

At the Congress for Internal Medicine, recently held at Wiesbaden, Dr. Koch presented microscopic sections showing his tubercle bacillus. He also described his work, and announced again his conclusions.

The ensuing discussion was somewhat disappointing, owing, no doubt, to the fact that no one had time or opportunity to repeat Dr. Koch's experiments.

Drs. Aufrecht and Klebs accepted the demonstrations of Koch. The former even went so far as to assume that the centre of true miliary tubercles is filled, not with degenerated cells, but with micro-organisms, partly rod-bacteria, partly micrococci. Aufrecht had seen organisms in tubercle like those found by Baumgarten as well as by Koch. Professor Klebs said that he had for some years occupied himself with the question of the infectiousness of tuberculosis, and he had tried to discover a disease-bearing organism. He was gratified at Koch's success, but warned him of the severe attacks his views would have to encounter. Dr. Seitz asked some pertinent questions with regard to how Koch would explain, on his theory, the existence of hereditary phthisis, and of the frequent occurrence of phthisis in certain diseases, *e.g.*, diabetes. Dr. Rühle followed with a similar inquiry, and said that even if Koch's facts regarding inoculation of the tubercular bacilli were correct, the etiology of human phthisis would yet be unsolved.

Koch replied to these gentlemen, and, as his answer contains a very clear statement of his view, we give it quite fully.

It is, he said, a well-known fact that the development of micro-organisms is greatly influenced by the character of their nutritive media. Human bodies do not always offer equally good nurture ground for pathogenic bacteria. Some persons may, while most do not, inherit a system which is well calculated for the development of the tubercular bacilli. These former are the hereditarily disposed to phthisis. The distinction between phthisis and miliary tuberculosis must, said the speaker, fall to the ground. For such distinction only depends upon the mode and amount of bacilli infection. In acute miliary tuberculosis large numbers of the pathogenic organisms are poured into the blood. In phthisis, however, only one or a few get into the lungs. Thus in the lower animals, when a very few tubercular organisms are inoculated in the anterior chamber of the eye, there is a slow and perhaps local tuberculous infection. If large numbers, however, are inoculated, the animal soon dies of a general tuberculosis.

The above account includes the most important part of the debate, which afterward drifted off into a discussion regarding phthisis in children.

It will be seen that our German brethren take Dr. Koch's discovery calmly, and are not as yet inclined to consider it an epoch-making affair. By Dr. Koch's own explanation it is shown that the existence and infective power of a bacillus does not solve entirely the problem of the etiology of phthisis. This bacillus only grows upon suitable ground, *i.e.*, in the phthisically predisposed. We have yet to find exactly what constitutes or brings about this peculiar predisposition. Again, according to his experiments the inoculation of the bacillus always produces tuberculosis in lower animals. Must we infer, therefore, that lower animals are always predisposed? We shall be very glad to find that Koch's conclusions are justified by further studies and experiments. But the evidence at present calls for much caution in interpreting their significance.

THE BRAIN CORTEX AND CRANIAL SURFACE.

The cortex of the brain and the correlative parts of the cranial surface are proving to be objects of a great deal of scientific inquiry. We have referred to Charcot's recent experiments upon hypnotized

patients, in which electrical currents applied to the cranium were found to excite muscular movements of the opposite side of the body. M. Delaunay has been making experiments of a different character, but from which he draws conclusions that are quite as novel.

It is unquestionable that there is some relation between the temperature of the brain and that of the cranial surface. Different parts of this surface have different temperatures, which temperatures vary slightly in accordance with cerebral changes. Exactly what the laws are that regulate the relation between cortical and cranial temperatures is not known; but it is almost certain that this relation is a physiological, not a physical one. There seems to be some vaso-motor sympathy between the two parts, by which a change in the vascular supply and temperature of the cortex induces also a change in the scalp. M. Delaunay announces the highly ingenious view that an increase in the temperature of the cranial surface will call out an increased activity in the brain beneath. In other words, he considers it a rule that will work both ways. This stimulus of warmth to the cranial vaso-motor nerves will sympathetically affect the brain cortex. M. Delaunay's proofs of this interesting hypothesis rest upon experiments made upon himself during sleep. He states that the application of warmth to the cranial surface changes the character of his dreams from absurd and childish fancies to logical and coherent thought! We leave it to our readers to ponder over and test this highly interesting announcement. If true, there is a rich field for warm flatirons in soothing uneasy slumbers.

A Self-Acting Reporting Machine.—Several journals give an account of an instrument, invented by Herr A. Gentilli, of Vienna, and named by him the glossograph, consisting of an ingenious combination of delicate levers and blades which, placed upon the tongue and lips and under the nostrils of the speaker, are vibrated by the movements of the former and the breath flowing from the latter. The vibration is transmitted to pencils, which transcribe the several signs produced by the action of the tongue and lips and the breath from the nostrils, upon a strip of paper moved by a mechanical arrangement. As in shorthand, a special system of writing which may fitly be termed glossography, is produced, based upon the principle of syllabic construction and combination of consonants. It is said to be especially suitable for those languages the orthography of which differs least from the phonetic record of the apparatus. The instrument is self-acting in the fullest sense. Moreover, its application involves as little fatigue to the speaker as severe attention on the part of the person transcribing. In reporting proceedings in Parliament or courts of law, it is not necessary that the speaker should use the apparatus himself. Anybody may articulate it by repeating in a low voice the words of a speaker, which is sufficient for recording the signs.

Reviews and Notices of Books.

A Treatise on the Science and Practice of Medicine; or the Pathology and Therapeutics of Internal Diseases. By Alonzo B. Palmer, M.D., LL.D. New York: G. P. Putnam's Sons. 1882.

This volume of 896 pages, written by one of the oldest professors of medicine in this country, was designed for the use of students and physicians. The author believes that the time has not yet arrived for a strictly scientific classification of diseases, and therefore in the arrangement of the subjects "convenience" has been followed chiefly. What he denominates "a natural order," however, has been observed; in other words, the book is composed of a series of articles on medical topics, beginning with general pathology and therapeutics, and closing with local diseases. Here is one of the weak points in the author's labor. It is too much like the work done by a reaper who walks into a field of grain and "strikes in," and too little like that done by one who follows a well-matured plan which carries with it the conviction that the fruit of the field is to be cleanly gathered.

Again, at the outset there is evidence that the editorial work has been too poorly performed. The lack of system in the general arrangement predicts confusion and incompleteness in the details. And so it is. For example, the author says: "Local diseases are then treated of, closing with the complex affections of the nervous system, and an account of human parasites is added, and a description of the internal diseases which they produce closes the work." But the reader turns the leaves and finds the end of the book without seeing any account of the affections of the nervous system or diseases produced by parasites. In addition, no account is found of diseases of the lungs, pleura or heart. Nor is there anything upon either the title-page or the cover, or in the preface, to indicate that there is to be more than one volume. The information that this is the first volume is found only in the table of contents.

Again, there is lack of system in what the author has to say on each disease. In many instances we find a continuous story, without special reference to etiology, morbid anatomy, diagnosis, differential diagnosis, prognosis or treatment. In other words, the absence of subdivisions compels the reader to go over the whole article for the sake of finding what has been said on any particular point. Perhaps there is skill in this.

Moreover, the natural order which the author follows has not been made apparent in the text by anything which indicates where "general pathology and therapeutics" ends, and the study of "general diseases" begins. The general value of the book is much reduced by these deficiences, which could have been easily supplied.

There are also incongruities. For example, under the head of "Bites of Insects," the author presents the theory he accepts with regard to the formation of pus. The pathology of inflammation has already been discussed upon preceding pages, and it would seem that that might have been sufficient. The theory, however, is so nicely elaborated that the language is worthy of quotation: "Every cell in the living tissues has a cell wall, and a more highly vitalized bioplasm within. In the natural condition, in the nutrition of the living cell, the nutrient mat-

ter passes slowly through the former cell wall to the bioplasm, and changes are gradually produced. When a cell wall is penetrated by the lancet of a flea, exposing the bioplasm of the cell, nutrient material is speedily taken in and appropriated, and a rapid but morbid cell growth takes place. These cells then become embryonic, undergo rapid change, and frequently become pus-corpuscles, many of which may thus be quickly produced. In all ordinary forms of inflammation, the bioplasm of cells increases, gives off diverticula, which become detached, and in turn grow and give off more processes, until from a few particles of irritated bioplasm, liberally supplied with pabulum, numerous embryonic cells, many becoming pus cells, result. Though leucocytes are exuded from vessels and present themselves as corpuscles, I cannot but think that in the ordinary processes of suppuration the chief production of pus is from the multiplication and transformation of the cells of the tissues involved. In these small injuries effected by the flea, the process is limited and suppuration is not established." That this statement is definite cannot be disputed, but it seems to us that it has been put so clearly as even to surprise the microscope, although it contains the germ of the view which has stood in opposition to the theory of diapedesis of white blood-corpuscles.

This leads us to the general criticism that the book is essentially one of clinical medicine, under the form of a "treatise on the science and practice of medicine." The author has expressed a desire to avoid the extremes of "superficial brevity and elaborate profuseness," and in a considerable portion of the book he has accomplished his purpose well; but, viewed even as a work on clinical medicine, we are impressed with the idea that he has rather overdone the work and sheared too closely while discussing questions of diagnosis, differential diagnosis and certain features of treatment.

Furthermore, he says that, "not having himself been devoted to original work in morbid anatomy, the description of anatomical and histological changes partakes of the character of a compilation from the more recent and reliable sources." Nor is there any evidence that the author's compilation was revised by an expert, and he has, therefore, exposed it unnecessarily to adverse criticism. No man who has not, to a considerable extent, devoted his time to the study of gross and microscopical pathological anatomy, can act wisely and give his manuscript on morbid anatomy for publication before it has undergone careful revision by some one who has "devoted himself to original work" in that department. To have done so would have added largely to the value of Prof. Palmer's book. As it now stands the language is that of a writer who is not quite sure of the ground which he occupies, and to protect himself he has incorporated sentences which reveal his doubts still more clearly. For example, the unqualified statement that "every cell in the living tissues has a cell wall," has been considerably modified since many years ago it was announced by Schwann. Indeed, the author himself, several pages preceding, and quoting from Beale, says that "the outer wall is not considered essential to the cell as a life element." Further, he says, speaking of the morbid anatomy of erysipelas, that "the circumscribed blush, or congestive redness, is soon followed by inflammatory effusions (serum, lymph, and corpuscles) in the substance of the skin and the subcutaneous tissue." This description is hardly what it should be, even when supplemented by the statement that "some authors are of the opinion that the primary seat of the inflammation is in the lymphatic system." Certainly it is not "elaborately profuse."

But, passing from the pathological to the clinical aspect of the book, we notice the author's classification of fevers. Sandwiched between the classification, however, and what he has to say upon fevers, are nearly thirty pages devoted to the consideration of "minor ailments," such as "conditions of the tongue," "morbid appetite," "nervousness," "rheumatic pains," "taking cold," etc. The reason given for their insertion at this place is because they "are accompanied with feverishness," an excuse which would bring a very large proportion of diseases within the same brackets. The arrangement forms an unpleasant medley.

The author divides fevers into symptomatic and idiopathic. The idiopathic is subdivided into non-specific and specific, and the specific into periodical, continued, and eruptive. Among the continued we find whooping-cough, mumps, and cholera. No mention is made of typho-malarial fever. As can be readily seen, the classification possesses some novelties. In the light of generally accepted views, the propriety of classing pertussis, parotoditis, and cholera among the continued fevers is questionable. Those views, however, may be erroneous. With more propriety could certain other affections be regarded as essential fevers than those mentioned. In the preparation of the pages on diseases of the liver, the author states that he has "drawn freely from Dr. Murchison's admirable writings." Exactly why the subject of "Jaundice—Cholæmia" should be divided, and have placed between its pathology and diagnosis several pages on organic diseases of the liver, is not apparent. Such fragmentary deliveries are hardly excusable. The author gives as a reason for writing his book, that the few works by American authors are insufficient "to fully supply the wants of the reading American profession," as proven by the large number of foreign works which are reproduced in this country, and yet he himself has "drawn largely" from those foreign writings. The morbid anatomy is almost entirely from foreign authors, and the views of Rindfleisch and others are apparent. The symptomatology has no essential variation from that based upon private and hospital practice in large cities, nor, so far as we have discovered, do the therapeutics of the book give us any essential differences, notwithstanding the claim that "the practical directions of the authors of foreign works cannot be accepted as proper guides to be fully followed in the treatment of the ordinary medical diseases of our general population."

The book as a literary production is fair, although there are some evidences of carelessness in proof-reading, punctuation, and indexing. The "liquor sodæ chloratæ" was doubtless intended for liq. sodæ chlorinatæ; "Kibel's fever cot," for Kibbee's fever-cot. The substitution of the word "penetration" for perforation, in connection with the subject of ulceration, does not seem to be in favor of euphony at least, and the expression "diseases chiefly of the small intestines in general" is somewhat redundant. The book is printed well, with type of good size and upon good paper. There is considerable good material upon these pages, and much of it is presented in well-chosen language, but we feel obliged to say that the work as it now stands will not supply the want of the advancing medical student or physician.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, May 19, 1882.

DR. W. M. POLK, PRESIDENT (*pro tem.*), IN THE CHAIR.

THE SEQUELÆ OF MEASLES, WITH SPECIAL REFERENCE TO THE DEVELOPMENT OF A STRUMOUS DIATHESIS.

DR. V. P. GIBNEY read a paper on the above subject (*vide* page 589).

Dr. Gibney, in response to a question, said that, in some cases, there was no doubt at all that measles were the cause of the bone affection. That is to say, the measles were the cause of a diathesis which laid the foundation for the subsequent disease. The children were not strumous before they had the measles. The average age of the children whom he had seen was five or six years, the range being from two to ten.

DR. GEORGE F. SHRADY said that he had observed cases where measles seemed to be the exciting cause of joint disease in strumous children. He called to mind two patients in particular, in whom such a relation of cause and effect existed.

DR. GIBNEY, in response to a question from Dr. Walker, said that he had not noticed any arrest of bone development to follow measles.

DR. BEVERLY ROBINSON said that, as regards the

EFFECT OF MEASLES UPON MUCOUS MEMBRANES,

there was no one of the acute fevers of childhood which affected so disastrously, as this, the mucous lining of the nose. He could recall two or three most obstinate nasal catarrhs directly attributable to measles. He did not remember that the ears were often affected, however, and he had been rather struck by this fact. In these nasal catarrhs there was sometimes a very fetid odor to the breath, which could not be accounted for by any especial anatomical change. There was no bone disease and there were no ulcerations. The patients in whom he had noticed this had not been in bad hygienic surroundings nor were they of a strumous diathesis. The speaker suggested, therefore, the advisability of paying more attention to these catarrhs when they come on during measles. There was another change which he had noticed in cases where the cough had lasted for some time, or which had ended in catarrhal phthisis. In these he had found, on autopsy, considerable enlargement of the bronchial glands, these glands being sometimes in a state of cheesy degeneration. He had thought it probable that these glands, by pressing on the bronchi, caused, in part, the obstinate cough. On more than one occasion he had used local irritation between the shoulders, in the hope of affecting these enlargements. In some cases he thought he had been successful, though, of course, it was impossible to speak positively.

DR. SAMUEL SEXTON said that, in 1861, when his regiment first went into camp, they were attacked with an epidemic of measles. A very large number of the command were affected. He was surprised at the time to see how few men were invalided by the disease.

As regards the

FREQUENCY OF AURAL COMPLICATIONS,

he thought that measles stood next to scarlet fever in causing such complications.

However, he had been surprised at the Eye and Ear Infirmary to find how many persons attributed ear trouble to measles and scarlet fever, yet, on close inquiry, how little they really had to do with it in many instances. It was peculiar that the eruption of measles very rarely extended into the auditory meatus and affected the tympanum. He had made some studies in order to get at the exact facts here, but they were not yet completed.

The acute purulent inflammation of the middle-ear in measles does not materially differ from that induced by other causes, but there is very often a sub-acute form of middle-ear inflammation without pain or discharge, which is to be apprehended. It is not usually noticed for some time, and, indeed, may only be discovered when the hearing power is called into requisition at school, or when a severe cold in the head causes an exacerbation of the already existing disease. He thought such cases more common than is usually supposed.

He recalled a case where a long standing purulent inflammation of the middle-ear was seemingly cured by an attack of measles. But this was very exceptional. The speaker referred to the fact that the ear was very often in a hyperæmic condition during the course of an attack of measles from reflected sympathy; thus it was important to remember that dentition is active during the period of life when this exanthem is most prevalent, and the same reflex irritation in the ear may be induced by nasal catarrh.

He thought that something might be done to

PREVENT AURAL COMPLICATIONS

by the timely use of remedies. When suppuration threatened, he believed that much good could be done by the use of calcium sulphide. A case was related in which one ear had suppurated and the other threatened to do so. The patient was put upon the calcium sulphide, and the threatening symptoms abated. Aconite was given at the same time to relieve the nervous irritation. He deprecated over-much syringing of an acutely inflamed ear, and believed that surgical interference by perforating the membrana tympani had been too frequently practised. He did not perforate the drum-membrane once now to a hundred times formerly.

The question of an anæsthetic was always to be considered when this operation had to be performed, for it was by no means always free from pain.

DR. ROBERT F. WEIR said that the subject of preventing aural and nasal complications, in children affected with scarlatina or measles, had interested him some time ago when he was connected with the New York Eye and Ear Infirmary. He was then also in general practice, but he used to hear specialists talk very glibly about preventing the aural troubles which resulted from the exanthemata. But practically he had found it impossible to do anything of importance. The children are irritable and unmanageable, and would not submit to nasal medication, or the medication was so distressing in the eyes of the parents or nurses that it would not be properly carried out. He felt as Dr. Sexton did with regard to puncturing the drum in children. He thought that nature did this satisfactorily if it was necessary. In his experience with such pa-

tients the drum membrane healed satisfactorily after a natural puncture if simply and properly treated, and no permanent damage to it resulted as a rule.

Dr. James B. Hunter related the history of an epidemic in the army, which attacked a body of 600 men, nearly half of whom were affected. The disease was of a virulent type. The men who were attacked were all from the country, and for the most part had never had the disease before. None died from the measles directly, but there were many deaths from pneumonia which developed in the course of the disease. Many others were permanently disabled.

WITH REGARD TO THE EFFECT OF MEASLES UPON THE REPRODUCTIVE ORGANS,

he had seen very little. He had, however, observed attacks of vaginitis occurring during the course of the measles, followed by an obstinate form of leucorrhœa.

Dr. Charles L. Dana referred to Dr. Gibney's query whether an attack of measles would ever cure epilepsy. This seemed improbable and difficult to prove. Most epileptics have had measles either before or after their disease developed. On the other hand, children who have epilepsy sometimes recover spontaneously or under treatment during or at the end of their childhood. He recalled some cases of this kind. It would be hard to say, therefore, that the measles were ever a genuine cause of cure.

Dr. Sexton said that aural complications had a very short course as a rule. He did not think that there was as much done in the way of treatment as there used to be. The practice of syringing out the ear often did more harm than good.

Dr. George L. Peabody said there could be no doubt that measles led sometimes to catarrhal pneumonia, and this to tuberculosis. Measles, however, were only indirectly the cause of tuberculosis.

He had once made an autopsy on a case of measles and had carefully examined the skin. In the parts where the eruption existed, he found large colonies of micrococci. These evidently came from without, however, since they existed chiefly in the sweat glands and were evidently making their entrance through these channels. Where the skin was free from eruption, there were no micrococci.

Dr. Robinson referred to a paper by Dr. Keating, of Philadelphia, in a recent number of the *American Journal of Medical Sciences*, in which it was maintained that measles were the eruptive disease of childhood most frequently followed by fibrinous coagula in the heart. Dr. Robinson suggested the probability that the pneumonia following measles was of the embolic form. He had had no practical experience, but thought it fair to assume such to be the case.

Dr Gibney, in conclusion, said that he had wished to have it shown that measles are not the trivial disease they are sometimes considered. He knew that conditions of bad health were brought on by this affection.

TUBERCULAR SYPHILIDES UPON THE AURICLES.

Dr. Samuel Sexton related the case of a married woman, aged about twenty-eight, who presented herself with a very peculiar-appearing eruption, nearly covering both auricles. The crusts were very thick and nearly occluded the meatus. No very good history of syphilis could be obtained. Yet the eruption was characteristic, and was undoubtedly a tubercular syphilide. She was placed upon the mixed treatment in small doses (potas. iodid. gr. v., corros. sublimate, gr. $\frac{1}{20}$). Under this she very rapidly improved. The unusual place of the eruption and the speedy relief under small doses of potas. and mercury, were the interesting features in the case.

REMOVAL OF NASO-PHARYNGEAL POLYPUS BY NÉLATON'S OPERATION—DEATH.

Dr. Robert F. Weir related the history of an operation for removal of a naso-pharyngeal polypus, which had some points of extreme interest.

The patient was a boy, aged eight. A year ago he had had diphtheria, and this was followed by the "snuffles." This symptom did not attract attention for some time. It was at last noticed that he could not sleep in the ordinary position. He then began to have nasal hemorrhages.

He was taken first to a quack who blew powders up his nose. He then went to a physician in Newark, who tried to remove the tumor, which hung down just in view, by splitting the soft palate after Manne's method. The child developed some alarming symptoms from hemorrhage and shock, and was resuscitated with difficulty. Recently he was sent to Dr. Lefferts, of this city, who turned the case over to Dr. Weir.

The child was then in hardly a fair condition of health, but no delay in order to improve him was allowable on account of the recurring hemorrhages and disturbed sleep.

An examination showed the tumor to have encroached anteriorly in the nostrils, but not entirely to have occluded them. It also hung down nearly to the base of the tongue. The tumor was thought by digital examination to be attached to the base of the basilar process of the occipital bone.

The points to be determined before operating were: (1) the kind of operation; (2) the question of preliminary tracheotomy.

First.—The experience under the first head, in this city, was embraced in the cases of Dr. Sands and Dr. Peters. They had adopted the plan of taking out the lower portion of the upper jaw, as suggested by Maisonneuve, and thus effecting a broad entrance to the lateral aspect of the base of the basilar process. This operation, though a good one for large tumors, would involve an unnecessary disturbance of the parts in the present case. Vallet's operation also did not seem advisable, though in it less destruction of the bony parts took place, with an efficient lateral exposure. The speaker, therefore, in this instance, as the roof of the mouth was a wide one, determined upon that devised by Nélaton, which consisted in cutting through the soft palate, then removing a large portion of the hard palate along with part of the vomer. [This was demonstrated upon a skull, as was also bony sections of Vallet and Maisonneuve.]

This method exposed the basilar process and nasal fossæ completely, and was, he thought, best adapted for removal of tumors of moderate size. It had been done, according to Robin-Massé, seventeen times with only three deaths. This as well as the other operations were devised with the idea of having a permanent opening leading to the basilar process. The osteoplastic operations should not be entertained by the surgeon, because of the well-known tendency of such tumor to return, which demanded a number of secondary operations often extending over years.

Second.—The second point was that regarding the advisability of doing a preliminary tracheotomy.

The speaker had studied the question carefully, and had finally concluded not to do this. In Dr. Sands' case, however, it was not done, and the hemorrhage was easily controlled, and trachea saved from blood intrusion by keeping the head well forward, with the patient only under partial anæsthesia. This plan was somewhat troublesome, but effective. In Dr. Peters' case it was done with a satisfactory result. Notwithstanding this, Dr. Weir was influenced in his decision in part by his belief that tracheotomy was not the comparatively safe operation often supposed. He had found in support of this view that, in ninety-three cases of tracheotomy performed for the early removal of foreign bodies in the air passages, there had been twenty-six deaths. On the other hand, however, the risk that accrued from blood entering the trachea, etc., was not to be statistically estimated. He believed now that his decision not to perform tracheotomy was an error of judgment. This would be apparent from the details of the operation, which were as follows:

The patient was anæsthetized and the head thrown strongly backward over a hard pillow (Rose's position) so far that blood would not run into the trachea, and supported on a sand-bag. The operation was then begun, with the mouth held open by Dr. Weir's mouth gag; the soft parts of the hard palate were cut in the median line and stripped from the bone, and the latter divided with a chisel on each side from the level of first bicuspid tooth and transversely at this point, so that a space nearly an inch wide was made, affording a complete view of the tumor antero-posteriorly, with no difficulty except quite free venous oozing, some of which came from a wound of the tumor itself.

At this moment the patient suddenly began to gasp and choke. The speaker could not say whether blood had been sucked into the trachea or not. The asphyxia was so great that tracheotomy was at once performed with a single cut, a tube inserted, when the patient revived. Dr. Weir, however, noticed, when he performed tracheotomy, what he considered an important fact in connection with Rose's method, and which a subsequent experience, in two other operations in which the plan was adopted, has confirmed, that the trachea was so stretched that the anterior and posterior walls were very close together, and in the first incision the posterior wall was nearly cut through. It seemed to him, therefore, very probable that this stretching and compression of the trachea, more possible in the young subject, had something to do with the bad symptoms. The tumor was then readily removed without any difficulty and without much loss of blood. The child was, however, much prostrated, but rallied, and at the close of the cauterization of the narrow attachments of the tumor, was apparently doing well. He was then removed to the ward. In a few moments word was sent up that the child was sinking. Death occurred so suddenly that arterial transfusion, which was contemplated, could not be resorted to. The tumor was attached at the usual place of such growths, on the basilar process. It measured 1⅞ by 1⅝ by 1¼ inches, and weighed 17 grammes, or over half an ounce. Dr. G. L. Peabody, pathologist of the New York Hospital, pronounced it a fibro-sarcoma. It had a few mucous cells, and probably originated as a myxo-sarcoma.

Dr. Weir would, in a similar case, perform the same operation, but would perform preliminary tracheotomy with a sponge tampon (Nussbaum) in the pharynx, and in addition would then keep the head less dependent—although certain steps of the operation are facilitated by this position. The procedure adopted, of throwing the head strongly back, is an extremely helpful one in many cases, though it did not work well in the present one. He had often resorted to it. It, however, was open to the serious objection that it markedly favors venous bleeding. Hence the usefulness of tracheotomy, either with a Trendelenberg tube or the ordinary tube, and plugging the pharynx, in permitting a variety of positions suitable to the exigencies of the case.

NASO-PHARYNGEAL POLYPUS WITH EXTENSIVE ATTACHMENTS—PROPOSED OPERATION FOR REMOVAL.

Dr. George F. Shrady said that Dr. Weir's case was particularly interesting to him, as he had at the time a boy upon whom he proposed to operate for the same trouble. The patient was fourteen years of age, and had suffered from the disease for three years. The growth was much larger, and evidently had more extensive attachments than in Dr. Weir's case. It entirely filled the posterior nares on the left side, and straddling the post nasal septum, partially occluded the right posterior nasal opening, crowding the velum palati and hard palate downward and forward almost in a perpendicular direction. It was attached to the basilar process of the occipital bone, to the left side of body of the sphenoid, and to the margin of the internal pterygoid plate. Dr. Shrady also believed that it was adherent to the apex of the petrous portion of the temporal bone, and had extended through the spheno-palatine foramen into the zygomatic fossa, and thence into the spheno-maxillary fossa. The latter was more than probable, as exophthalmus existed on that (the left) side. Possibly, also, the antrum was involved, crowding up the floor of the orbit. There was a firm movable fibrous tumor in the substance of the left cheek, immediately underneath the malar process, which was suspected to have a connection posteriorly with the original tumor through the spheno-maxillary fossa.

In his case Dr. Shrady did not think that Vallet's or Nélaton's procedures would be of any avail. He proposed to perform Maisonneuve's operation of partial resection of the upper jaw, saving the velum if possible, and working from the base of the tumor either into the antrum, the spheno-maxillary fossa, or both, as might be rendered necessary. He believed that was the only plan that would give him ample room for rapidly detaching the growth and controlling hemorrhage. If possible he would surround the base of the tumor when exposed, with the galvano-cautery wire, and remove it by that means. He thought Dr. Weir's experience in the case related emphasized the necessity of preliminary tracheotomy in all similar operations. Dr. Shrady would certainly open the windpipe in his case, and tampon the throat with a sponge. This he thought was a surer and simpler procedure for preventing the entrance of blood into the trachea than that recommended by Trendelenberg and others.

Dr. Shrady stated that he would report the result of the operation at a future meeting of the society.

Dr. Beverly Robinson suggested that the forcing back of the neck might have stretched the pneumogastric nerves so strongly as to have caused an interference with the heart's movements, or, indeed, a real cardiac paralysis.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, May 16, 1882.

DR. JOHN C. PETERS, CHAIRMAN, *pro tem.*

DR. L. PUTZEL read a paper (see p. 592) entitled:

A CASE OF HEMIPLEGIA, ILLUSTRATING THE CONNECTION OF DESCENDING DEGENERATION AND ATROPHY OF THE ANTERIOR HORN OF THE SPINAL CORD.

DR. E. C. SEGUIN said there was nothing to be offered in way of criticism upon the communication, and he regarded it as an exceedingly valuable contribution to the literature of the subject. He had seen several cases of atrophy occurring in paralyzed limbs in hemiplegia, but he had not been able to obtain post-mortem examinations. He had thought that, in these cases, there was a degree of polio-myelitis, secondary probably, and existing upon the same side.

DR. A. MCL. HAMILTON said that in the majority of cases he had found evidence of secondary degeneration and contractures, and more or less atrophy of the upper extremity particularly, and probably in one-half of the cases or more it was due to secondary degeneration. But he had not been able to obtain autopsies.

DR. V. P. GIBNEY asked whether the acute atrophy which occurred was the same as that seen in infantile paralysis. His experience differed from Dr. Putzel's, in that he did not recall any case where any great amount of atrophy took place. If he found no atrophy in the upper extremity, and it was found that the child had a limp, he suspected cerebral hemorrhage. He supposed that Dr. Putzel referred to infantile hemiplegia, and would ask whether any gentleman had found much atrophy in these cases.

DR. SEGUIN said that the question was an important one. He thought that his experience accorded with Dr. Gibney's. He had been accustomed to distinguish between what he had called relative atrophy and pathological or positive atrophy. Relative lack of development was very common, and without positive atrophy; that is, without disappearance of muscular tissue and the presence of abnormal muscular reaction.

With reference to atrophy in hemiplegia in adults, he could say, as Dr. Hamilton had said, that it was very rare. He had met with one case in which *positive* atrophy was associated with hemiplegia, but in that case there was history of injury upon the side of the neck associated with the peculiar appearance of the skin and nails following nerve injury, and he should not be willing to refer to it as a case of positive atrophy in hemiplegia occurring in a child.

DR. HAMILTON thought that, in a great many cases of infantile hemiplegia with atrophy, the history was not fully known. He did not think it was common in simple, ordinary cases. He recognized the distinction between relative and pathological or positive atrophy mentioned by Dr. Seguin.

DR. VAN SANTVOORD asked if the brain lesion was due entirely to the embolism or did the pachymeningitis participate.

DR. PUTZEL thought it was almost entirely due to the embolism, because the pachymeningeal membrane was so thin. With reference to atrophy in children, he did not mean the positive pathological atrophy mentioned by Dr. Seguin. He did not understand how that could occur in such cases. What he meant was a difference in the size of the limbs, presenting about the same relation seen in well-marked cases of acute polio-myelitis. The general appearance of the limbs compared with healthy ones was quite frequently as well marked as in infantile paralysis.

DR. A. MCLANE HAMILTON then read as follows:

A CASE OF WORD-BLINDNESS WITH LOSS OF TASTE AND SENSE OF LOCALIZATION.

The following case possesses, I think, points of interest, because a rather rare collection of symptoms are presented by the patient who has recently been under my observation. The most remarkable manifestation of his cerebral disease—a certain impairment of what may be called the sense of relation—is, I think, unusual, and with this there is the affection to some degree of the faculty of localizing. The man also was apt to reverse objects, a symptom which was a feature of the aphasia of the late Dr. Allin, whose case has been so admirably reported by Dr. Ball.

Wm. H. M——, aged thirty-three years, is a printer. He is a man of good habits, and has not had syphilis. His family history is good, his father and mother are alive, and there is no neurotic taint. He possesses more than ordinary intelligence, and in following his trade has been engaged in "book-work." He was always considered skilful at his trade and made few mistakes in composition. He never has had lead disease.

For a short time previous to October, 1881, he had had domestic troubles, was worried, and lost flesh and strength. He, for several of the early days of October, felt "distressed about the head," and had slight vertical pain, but no vertigo. Upon the afternoon of the 10th, he had a sense of impending trouble, but had no idea of his real condition until his foreman called his attention to the remarkable character of his work. His "stick" contained matter which was full of mistakes, known to his craft as "doublets." In almost every line he had repeated one word several times, and many of the words were transposed. In other places the type were upside down. He knew nothing of all this until his attention was directed to it, and his mistakes were repeated to him, but he could not correct them but made fresh blunders. At half past five he still felt badly and was obliged to stop work. He went to a neighboring eating-house where he had frequently dined, and though the door knob was large he had considerable difficulty in finding it. After entering he staggered, could walk only with difficulty, and dragged his right foot. He could not ask for what he wanted and was considered drunk.

He managed to leave the place and went home. His right leg remained numb and weak, and he fell frequently. He remembers that while walking he was inclined to proceed in a semi-circular direction, mainly toward the right, and that his face was turned toward the right.

He next became unconscious and remembers nothing until next morning, when he was found by persons who had broken into his room. He heard all questions but could not reply. He could move his right leg feebly as well as his arm. He was next taken to the Chambers Street Hospital, where he remained for two days. So far he could not speak, but with the next month began to talk, but could not read. He could repeat words after another person.

I first saw the patient about the end of February last. He is a man of spare build, rather poorly nourished, and has an annoying cough. He presents a poorly marked paresis of the right side, but there is a very slight clumsiness in his gait. The dynamometer shows that he can force the index about twenty degrees farther around on the left side, and his hand grasp is stronger on this side. The right angle of the mouth is lower than the left, and there are transitory fibrillary tremors of the facial muscles. No lead line is to be found, and there is no marked extensor paralysis, he being able, with his hands upon the table, to lift upon the dorsal surface of the finger a weight of one and one-half pound. Tactile sensibility and the temperature are affected on the right side. He has occasionally frontal headaches. The left pupil is very slightly dilated. Has control over tongue; no deviation of uvula or irregularity of fauces. The tendon reflex is very faint on both sides. There are no darting or stabbing pains. There is no cumulative tremor when a cup or glass is carried to his mouth. The functions of the bowels and bladder are unaffected. Specific gravity of urine, 1020—normal; heart and lungs normal.

Shortly after the seizure his right arm would often be spasmodically drawn across the chest, and at the same time the leg would be flexed. These seizures were temporary, however.

An ophthalmoscopic examination was made by Dr. Ely, who found inflammatory changes in the vicinity of the macula in right eye; in left, large patches of retino-choroidal atrophy were found. Both optic disks were atrophic.

The patient is emotional, and sometimes cries quite easily. He is able to converse intelligently, seems to have a good memory, and has had no delusions or hallucinations.

The interesting feature of his trouble is shown when he attempts to read. He does so with great difficulty, going over the ground slowly and referring to previous words, just as the beginner in German does who is troubled by the construction of the sentence he is attempting to unravel. He reads substituted words which *look* something like those of the printed matter; for instance: *New Haven* for *New Hampshire; situate* for *stated; continue* for *countersign; desirous* for *declares; aldermen* for *Anderson*, etc.; but with proper names he had great difficulty. George W. Hunt, a name printed in the paper he was asked to read, was rendered John H. Hunt, and he made several attempts, and finally gave up in disgust. He prefixes unnecessary articles to whatever words he may be asked to read. He knows the denominations of coins, but cannot add them up. Though his trade is one that makes him expert in estimating distances, he cannot, when asked to make a line of certain length, approximate the true space. He always fell short. A line three-eighths of an inch was said to represent half an inch, and three-fourths of an inch one inch. He had no idea of adjustment. When told to place his index finger on the figures 12 on the dial of my watch, he could not do so readily; and when told to find a point midway between 12 and 6, he selected 4, and repeated the test several times without knowing his mistake. Upon more than one occasion he has made singular mistakes in the location of objects. One of his duties was to place the knives and forks at the patients' plates. He once or twice placed two forks or two knives at the same plate. At other times he placed the knife and fork at one plate with the points reversed, while at other plates they were properly arranged. When his attention was called to these things, he always expressed great surprise or annoyance, but invariably repeated the mistake when he next attempted the act. By accident a very curious mental condition was discovered—a loss of appreciation of situation. As a rule, the normal individual, when aware of the direction of one point of the compass, is able to designate the other. If he is placed with his face to the north, he knows that the east is on his right hand, the west on his left, and the south behind him. In the case of my patient the case was different. Dr. O'Brien and myself repeatedly tested this failure. It made no difference; and, though he could tell his right hand from his left, he was apt to transpose the points; and even when three of them were properly designated after prompting, he would be apt to reapply a term already used to the fourth.

These blunders were not the result of ignorance, for he conversed intelligently and had a very fair knowledge of general geography.

I find that with these symptoms there is some loss of taste—salt or sugar not being recognized.

Since I first saw him there has been decided diminution in the aphasia, and under large doses of iodide of potassium he has greatly improved.

Dr. Putzel said that of course the diagnosis was speculative; but in view of the well-marked aphasic phenomena, he should be inclined to locate the lesion farther back than had Dr. Hamilton, and would say that the disease existed in the neighborhood of the first temporal and the third frontal convolutions—perhaps the outskirts spreading farther back toward the terminal filaments of the frontal bulb.

Dr. Seguin said that the "symptom complex" was one which he had met with several times, and in many of the cases there had been hemiopia, with slight hemiplegia and persistence of some kind of aphasia—in one case the word blindness, and in another case chiefly the word deafness.

If there was hemianæsthesia in Dr. Hamilton's case, with recovery of motion and spoken speech, more particularly the reading part and sense of location, it seemed to him the suggestion of Dr. Putzel, that the location of the lesion must be placed farther back, was correct. He would locate it very near the site of the lesion in the case of Dr. Allin who had recovered from motor troubles, had only a slight degree of hemianæsthesia and no hemiopia, but there remained aphasia, slightly ataxic, and to a certain extent ataxic in reading. In that case there was a patch of softening, involving the inferior lobule, not extending down to the temporal convolution or to the limits of the parietal lobe.

Dr. Seguin then referred to a case in which the patient was able to spell out words of one syllable, but was unable to comprehend a word of *three* syllables; and he could write in five or six languages, but was unable to speak at all. The peculiarity in the sense of location in Dr. Hamilton's case was very important. He had noticed this symptom, particularly the turning of things upside down, the reversal of relations, in one patient, but in writing he did not get the lines wrong. For example, the patient after turning the pencil around two or three times would invariably stop it with the pointed end upward.

Dr. Hamilton had seen one other case in which there was inability to take hold of objects by the right end. The symptom with which he was espe-

cially struck in the case he had reported was the patient's inability to find the points of compass. With regard to localization, he thought that the lesion was either compound or one beginning in aphasia, and confined to the third convolution; and secondarily, his sense of the relation of locality was dependent upon an extended lesion in the frontal lobes.

TEMPORARY HEMIANÆSTHESIA AND APHASIA.

Dr. A. H. Smith narrated a case as follows: An associate editor of one of our weekly papers, a man of full habit, but not accustomed to taking stimulants, on a Saturday night sat up late reading proof-sheets, and in the morning had a severe pain on the left side of his head, vomited several times, his speech was confused, and he had great difficulty in remembering words. At eleven o'clock there was severe pain, some nausea, slight fever, a sense of numbness of the right hand and foot, pupils symmetrical, tongue protruded in a direct line, no loss of cutaneous sensibility, organs of special sense normal, speech somewhat thick, slightly ataxic, and there was decided difficulty in recalling certain words, and a peculiar disposition to use prominent words. This condition passed off entirely in the course of the day, and on the following morning he seemed entirely well.

The treatment consisted in moving the bowels, and giving a few doses of bromide. ℞ What was the prognosis?

Dr. Seguin thought that the patient was in danger of a recurrence of the attack.

Dr. V. P. Gibney narrated a case as follows:

PARALYSIS OF FLEXORS OF RIGHT FOOT, OF CEREBRAL ORIGIN.

Thos. O'B——, aged twelve, was admitted to hospital June 13, 1879. The family history is as follows: Father died suddenly of heart disease, though we could learn nothing of his family. Maternal family thought to be rheumatic. The patient had excellent health during infancy; indeed, was in good health and free from lameness up to twelve months ago when he is reported to have had cerebro-spinal meningitis. Was ill about two months. Taken with vomiting, had high fever, strabismus, and retention of urine.

Made a perfect recovery at the end of the two months, and went back to school, and was to all appearance well for two months, when he was taken with nausea and vomiting in school one day—went home, and was sick for several weeks, having pains thought to be rheumatic in right shoulder and arm. The symptoms finally seemed to yield to a blister to the nape, and he was well again for two or three months, when one day, walking in the street, he fell quite suddenly, without loss of consciousness, and on getting up fell again. He was able to walk home without any special lameness, but three days later the left foot and ankle became weak, and he dragged the foot in walking. This member continued weak, the arm not being affected at all. Within a few days past has complained of pain in the knee of same side.

On examination the only loss of power discovered was in the anterior tibial and peroneal groups of muscles of right foot. All the muscles of face and upper and lower extremities examined and noted, but details not transferred in this report.

He could not extend the toes or flex the foot or evert the foot. No anæsthesia, and no change in electrical reaction to either cumar. The right foot colder than the left.

The power to flex and extend the leg not quite as great as on left side.

Can extend foot well.

Right thigh one inch smaller than its fellow; knee same size, and calf only one-fourth inch smaller.

Limbs of equal length. Decided tenderness on pressure over spinous processes of first and second cervical and second and third dorsal. None on concussion. He states that slight blows on head cause it to ache.

The treatment consisted in daily applications of faradism, apparatus to retain foot in normal position, ergot and potass. iodid.

September 26th.—Discharged, relieved to such an extent that we felt like pronouncing the case cured. He stands squarely on both feet and walks without appreciable lameness. Can flex and extend—indeed, can execute all the movements of foot quite as well on the right side as on left. The power in the flexors is only about one-half as great as it is in those of left side. The faradic reactions diminished about one-half. He reported for observation on the 7th of October, and was found to have had no relapse, and again on the 15th of December. On this date he complained of frontal headache if he walked much or if he studied. I examined him shortly after this visit, finding a certain degree of hypermetropia with ophthalmoscope, and thinking his headache might depend on the error in refraction, we referred him to the Manhattan Eye and Ear Hospital. Dr. Webster wrote me, December 20: "He has corneal opacities, both eyes. R. E. V=$\frac{20}{20}$, hypermetropia of at least $\frac{1}{4}$ by ophthalmoscope. L. E. V=$\frac{20}{30}$, irregular astigmatism with the ophthalmoscope. But little can be done for this eye in the way of glasses, certainly not without the use of atropia."

Dr. Putzel, on going over the case this morning, regards the paralysis of cerebral origin, and thought it most likely a hemorrhage near cortex—possibly a tumor. I ordered ergot again in ʒ ss. doses, t.i.d.

March 8, 1880. — Reports headache subsided promptly with the ergot.

April 17th.—No lameness. No headache for three months. Taking no medicine. Studies now without any inconvenience.

November 27, 1881.—Found (living at 224 East Thirty-sixth Street) and in good health, free from lameness, and rarely has any headache.

Dr. Seguin thought that the lesion in Dr. Gibney's case was primarily in the paracentral lobule.

Dr. Putzel had known of a case of softening of the paracentral lobule associated with paralysis of the foot, but unfortunately there were other foci of softening, so that the connection was not clear.

The Section then adjourned.

Treatment of Vomiting in Phthisis—Pappaia-juice in Croup.—Dr. Brookes D. Baker, Government Physician at S. Kona Hawaii, Sandwich Islands, writes: "I have found by experience that the vomiting in phthisis can be controlled, in some thoroughly, in others partially, by the ether spray on the back of the neck, doing it just before meals. In very bad cases I have used it on the stomach as well.

"In cases of croup and diphtheria, the juice from the green fruit of the pappaia breaks up the membrane, so that it comes away quite freely."

THE GERMAN CONGRESS FOR INTERNAL MEDICINE.

Held at Wiesbaden, April 20, 21, *and* 22, 1882.

PROFESSOR FRERICHS, OF BERLIN, PRESIDENT.

A NEW medical organization under the above title met at Wiesbaden, April 20th. Professor Frerichs occupied the chair as President, and in his opening address showed the need and purposes of the new organization. About two hundred persons were present, including such prominent men as Leyden, Rosenstein, Koch, Klebs, Aufrecht, Jürgensen, Ewald, and Nothnagel.

A number of important debates took place, and many interesting papers were read.

The meeting opened with a discussion on Bright's disease, introduced by Leyden and Rosenstein. In the final résumé of the discussion, PROFESSOR LEYDEN said, among other things, that

First.—Nephritis is, pathologically speaking, a unit, inasmuch as there is no essential difference between the parenchymatous and interstitial forms, and all forms of nephritis are on a common type.

But in this unity there is so great a variety of symptoms, such differences in course and in anatomical proportions as well as in etiology, that for medical purposes it is best to make separate subclasses.

Second.—The typical nephritis runs its course in three stages. Contracted kidney may undoubtedly follow the nephritis resulting from scarlatina, articular rheumatism, intermittent or typhoid fever.

Third.—Leyden held it as established that there is a form of contracted kidney not the result of a nephritis. It is rather developed in conjunction with an arterial sclerosis, and is usually found in old age. It is this form which Bartels has described as the gray contracted kidney.

PROFESSOR ROSENSTEIN was inclined to classify kidney disease from an anatomical rather than a symptomological standpoint. He did not believe in arterial or capillary fibrosis as a starting-point of the disease, but thought it secondary.

In the afternoon session of the Congress, DR. KOCH demonstrated his discovery of the bacillus of tubercle.

The discussion upon it was closed by DR. BAGINSKY, of Berlin, who referred to the fact that in children chronic cheesy pneumonia and

MILIARY TUBERCULOSIS

were more frequent than the ordinary chronic phthisis as seen in adults. This, he thought, due to the fact that in children the right heart was relatively stronger than the left, while in adults the reverse is the case. For this reason the blood-pressure in the lungs is greater, proportionately, in children. The lung-tissue is more vascular and succulent, and affords a better nurture-ground for the bacillus tuberculosis!

The morning of the second day's session was devoted to a discussion of the

ANTIPYRETIC TREATMENT.

This was introduced by LIEBERMEISTER and RIESS. The former, after giving the history and object of the treatment, laid down the following propositions as expressing his own and Dr. Riess's views:

First.—In many cases of fever, the patients are directly in danger from the height of the fever.

Second.—In such cases it is the task of the physician to try and reduce the temperature by appropriate means.

Third.—The fundamental principle of the antipyretic treatment consists in the direct withdrawal of heat by cooling baths.

Fourth.—In many cases the use of antipyretic medicines, such as quinine or salicylic acid, is indicated.

DR. RIESS, in opening the discussion, described his method of treating fever patients by the permanent baths of 25° R. temperature. He showed a series of temperature charts of his cases. He was able, he said, by his method to keep the temperature in typhoid fever, pneumonia, etc., almost constantly within normal bounds, and to cause bad symptoms, especially cerebral, rapidly to disappear. Among 275 cases of typhoid, the average duration of the disease was 18.2 days; the mortality 9.1 per cent.

A very lively discussion followed, in which Drs. Jürgensen, Curschmann, Binz, Gerhardt, Rühle, and Mayer took part. All recognized the value of the antipyretic treatment, but there was great difference as to how energetically it should be employed.

PROFESSOR JÜRGENSEN contended strongly for the use of baths as soon as the temperature rose to a medium height.

DR. CURSCHMANN warned against the excessive use of baths as dangerous. Cases of uncomplicated typhoid, if carefully nursed, will run a good course without treatment. In his hospital he had treated one hundred to one hundred and fifty cases a year with a mortality of six per cent. to seven per cent. He used quinine and baths, the baths being gradually cooled as directed by Ziemssen.

DR. GERHARDT maintained similar views to the previous speaker. The patient was in danger from the specific poison of the disease as well as from the fever. Besides, some diseases needed special antipyretics; thus, for rheumatic fever, the salicylates of sodium or potassium; for intermittent fever, quinine; for typhoid fever, quinine and baths, supplemented by alcohol and the greatest possible amount of nourishment. He did not believe in the utility of salicylate of sodium in typhoid fever.

DR. BINZ argued against the view maintained by Riess that our treatment of fevers must necessarily be symptomatic, not causal. He referred to the specific action of quinine, the salicylates, and of mercury in syphilitic fever. In giving a specific it is not necessary to give such large amounts as to entirely annihilate the poison. It may be enough to simply hinder its active development and growth.

DR. RÜHLE argued very strongly for the abortive action of calomel in typhoid. He also insisted upon the necessity of studying the individual case carefully before applying any form of antipyretic treatment.

DR. MEYER advocated the use of warm baths, 26° to 28° R., for children with fever. He gave quinine also in 1 to 1.5 gramme doses.

PROFESSOR EBSTEIN, of Göttingen, gave a description of the pathological anatomy of

GOUTY ARTHRITIS,

with microscopic demonstrations. He showed in a series of preparations the deposit of uric acid salts in the cartilaginous tissues and the gradual destruction of these tissues thereby.

DR. FINKLER, of Bonn, communicated the results of his experiments upon the

TISSUE CHANGES IN FEVER

("Pflüger's Archivs," XXVII., p. 267). He found that the increased oxidation in fevers continues even in cold packs, but is less than when the animal is in a

warm medium. The increased oxidation in fevers is due to an increase of the same tissue-changes which occur in health. There is an increase of heat production with a modification of the heat-regulating apparatus.

Dr. Rossbach, of Würzburg, spoke concerning the genesis of coryza, and also upon a special vasomotor neurosis of the pharynx. The application of cold, wet cloths to the previously warmed abdomen produces a powerful reflex constriction of the vessels of the pharyngeal mucous membrane, completely emptying them. This is followed by a hyperæmic and catarrhal condition.

Dr. Rossbach related a curious case of

INTERMITTENT PHARYNGITIS.

The patient was neurasthenic and hysterical. He also complained of hyperæsthesia of the skin. He suffered every day from one or more attacks of swelling and redness of the pharynx, the mucous membrane presenting the perfect image of a catarrh. Without any treatment it would go away, often within a quarter of an hour.

Dr. Heuk related a case of successful extirpation of the pylorus for cancer. The operation was done by Prof. Czerny.

Prof. Nothnagel, of Jena, communicated the results of some investigations regarding the

ACTION OF OPIUM AND MORPHINE UPON THE INTESTINE.

He found that the constipating action of these drugs is due to its stimulation of the splanchnic. Morphine acts upon this as digitalis does upon the vagus.

Dr. Finkelnburg, of Bonn, described a special form of nervous disease indirectly resulting from hypnotism. A boy, aged eighteen, had been for some time in the service of the celebrated mesmerist Hansen. As a result he had become so susceptible that even the recollection of Hansen's procedures would throw him into a trance. The speaker considered the phenomena to be due to a psychical irritation, which acting upon very excitable centres tetanized them, so to speak. Other centres would be more or less modified by secondary excitations and inhibitions.

Dr. Leube, of Erlangen, showed that

CANE-SUGAR TURNED INTO GRAPE-SUGAR

in healthy human stomachs, but that the process failed in diseased conditions. Grape-sugar has not usually been found in the stomach, because it is so soon absorbed. But, if such absorption is prevented, it will be found.

Dr. Zuelzer, of Berlin, showed preparations illustrating the action of chloroform and morphia on the one hand, and of strychnine on the other,

UPON THE SPINAL CORD.

By the first the tissue decomposition in the nervous system is hastened, by the latter it is diminished, as is shown by the increase and decrease of the relative amounts of phosphoric acid in the urine. There are corresponding microscopic changes in the spinal cord. Zuelzer based his conclusions upon experiments on eleven animals, dogs, and rabbits.

Dr. Schultze, of Heidelberg, offered an explanation of the

PHENOMENA OF TETANUS

in some cases. He thought the normal excitability of the peripheral electromotor points might be so excited by disease as to cause a *reflex tetanus* without having to assume any gross lesion of the system.

Dr. Ungar, of Bonn, spoke regarding the value of

LEYDEN'S CRYSTALS IN THE EXPLANATION OF BRONCHIAL ASTHMA.

The fact that these crystals are found not only in bronchial asthma, but in fibrinous bronchitis, suggested the view that bronchial asthma was, after all, a fibrinous capillary bronchitis, and that the symptoms were due to a mechanical plugging of the bronchioles rather than to any spasm.

This view was very generally disputed.

The Congress then adjourned to meet again in Wiesbaden next year. It was considered a marked success.

Professor Frerichs was re-elected President.

New Instruments.

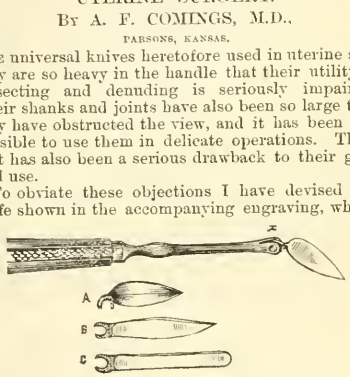
AN IMPROVED UNIVERSAL KNIFE FOR UTERINE SURGERY.

By A. F. COMINGS, M.D.,

PARSONS, KANSAS.

The universal knives heretofore used in uterine surgery are so heavy in the handle that their utility in dissecting and denuding is seriously impaired. Their shanks and joints have also been so large that they have obstructed the view, and it has been impossible to use them in delicate operations. Their cost has also been a serious drawback to their general use.

To obviate these objections I have devised the knife shown in the accompanying engraving, which



is no heavier than an ordinary scalpel, and which can be manufactured for less than half the cost of any other universal knife yet offered to the profession.

It is patterned after the ordinary right- and left-hand denuding knives in regard to size and length of handle and shank, the handle being octagonal in form.

The shank is slotted at H, and the inside of the slot corrugated to prevent the slipping of the blade, the shank of which is also corrugated and clamped tightly by means of a screw passing through blade and shank of handle at H.

Fig. A is a double-edged denuding blade, with shank at right angles to its flat surface, which may be readily set at any angle in the handle at H. Gynecologists will readily appreciate this adjustment when they remember that the cervix uteri and vaginal walls upon examination rarely present at the same angle in different cases or conditions.

Fig. B represents an ordinary scalpel blade, and Fig. C a probe-pointed bistoury for anterior or posterior sections.

The engraving shows exact size of blades, shank of handle, and joint, but for lack of space the length of handle is not shown. Including shank it should be about seven inches.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 21, 1882, to May 27, 1882.

MOSELEY, E. B., Captain and Assistant-Surgeon, granted leave of absence for four months. S. O. 120, A. G. O., May 24, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 27, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
May 21, 1882.	18	5	184	3	196	74	16	0
May 28, 1882.	6	6	131	4	191	73	14	0

RELATIVE POWER OF ANTISEPTICS.—The *Revue Scientifique* contains an abstract of experiments made by M. de la Croix to ascertain the relative value of various substances in preventing the development or evolution of the microbia of putrefaction. He placed finely divided boiled or raw meat in water, and ascertained the maximum and minimum quantities of each substance that were effective. The figures in the following table indicate the number of grammes of water in which one gramme of the substance mentioned prevents the development of microbia:

SUBSTANCE EMPLOYED.	Maximum dose in which development is not arrested.	Minimum dose in which development is arrested.
Alcohol	30	1.77
Chloroform	134	1
Soda biborate	107	14
Eucalyptol	308	14
Phenol	1002	10
Thymol	2229	20
Potash permanganate	3041	35
Borated soda salicylate	3377	30
Benzoic acid	4020	50
Sulphurous acid	7534	72
Alum acetate	7535	478
Salicylic acid	7677	343
Mercury bichloride	8358	2525
Sulphuric acid	16782	135
Iodine	20020	410
Bromine	20875	493
Chlorine	34509	431

From which it will be seen that chlorine, the hypochlorites, and perchloride of mercury are very effective, while alcohol is comparatively impotent.

A HAPPY SURGEON. — The French surgeon Gosselin, who has of late said a good deal about his "perfectly safe" way of giving chloroform, has been described by *Charivari* as follows: "Gosselin, a surgeon who at the Hôpital La Charité cuts off limbs with such good feeling, and disarticulates with such happy ease, that he seems rather anxious to cut something in order to amuse himself. His smile of bonhomie makes one think that the operation is real pleasure—to himself."

A DISAPPOINTMENT. — The *Century*, which announced in its prospectus that it would advertise no patent medicines, has recently appeared with a column advertisement of the notorious "Dr." Flower, of this city.

MEDICAL INSPECTION OF SCHOOLS.—The *Sanitary Engineer* discusses the above subject, and recommends the appointment of medical school inspectors as advocated by the profession so long. It errs, however, in saying that there is no city which has such inspectors. In Cleveland there is, we believe, practically a medical supervision of the schools.

PURULENT INFANTILE OPHTHALMIA is treated by Professor Gosselin, not with astringents but with alcohol and water (℥ i.–℥ v.). Four or five injections are used daily. Gosselin says that he is never disappointed in the result. We fear other physicians may be. Prof. Gosselin is a sanguine man.

DR. EDWARD W. JENKS has been obliged, by ill-health, to resign his position as Professor of Gynecology in the Chicago Medical College. Dr. Jenks thinks that he will have to return to Detroit. In any event he proposes to establish soon a private hospital for the diseases of women.

PYÆMIC PAROTITIS—A QUERY.—Dr. A. M. Leonard, of Camden, N. J., reports the following interesting case, and asks an opinion upon it: "Arthur N——, aged sixteen, some four weeks ago was taken with swelling of the parotid glands on both sides, but believing it to be only an attack of mumps no physician was employed. In a few days the swelling on the left side abated, but that on the right began to suppurate, forming a large abscess which I advised him to have opened, but he did not, and camphor was applied to 'scatter it,' as they afterward told me. Soon after he began the applications of camphor the entire surface of the body broke out with numerous small vesicles, which soon coalesced, forming large patches resembling somewhat those seen in poisoning by ivy. Vaseline was applied, which proved beneficial, but the skin about the neck, hands, and feet underwent complete desquamation. I then ordered him to take 30 ♏. syr. ferri. iodide three times a day. Then three large abscesses broke out about the axillary glands. These were opened, and they discharged a thick, dirty, grumous pus, and he has now recovered his usual health.

"Now is this condition of affairs due to lymphatic absorption, or to some peculiar condition of the glands? I suspect there is some strumous taint."

SELF-MUTILATION.—Dr. Thomas Partridge relates the following, *à propos* of a discussion on the subject of self-mutilation which has been going on in the *British Medical Journal*: "Several years ago, when assistant surgeon in a foreign naval service, my ship was stationed for three weeks in an extreme northern port of America. During our stay, several men contracted syphilis from the half-breeds (Indian and French). Three weeks or a month afterward, when we had returned to our depôt, I was summoned to the surgical room to see a stoker, said to be dying. On arrival, I found him

pallid, with a weak pulse, and very exhausted. On removal to the sick bay, I noticed a discoloration of the trousers about the thighs; and, on examination, detected bleeding from the penis. On retracting the prepuce, a jet of red blood spurted out. Calling in the assistance of my chief, we succeeded in stopping the hemorrhage by pressure and styptics, but, as may be imagined, not without some trouble. It transpired that the poor fellow, an Irishman, of a low mental type, had a chancre. He thought to get rid of it by incision; and, in doing so, wounded the dorsalis penis artery. The pocket-knife with which he cut himself was in his pocket, one blade having a smear of blood on it. Had a little longer time elapsed before he was noticed, death would have ensued, perhaps leading to various surmises; and, as he was disliked by his mates, this might possibly have caused unjust suspicions against one or other of them."

The Uses of Nitrate of Silver.—Dr. Chas. K. Mills, speaking of nitrate of silver (*Philadelphia Medical Times*), said that in nervous disorders he had found it one of the most useful remedies. In posterior spinal sclerosis, it ranked next to iodide of potassium. In chorea he had given it also with apparent success; and sometimes it seemed to be of use in sclerosis of the lateral columns. In epilepsy it was not so good as the bromides, or as the zinc salts with belladonna.

Goitre in the Lower Animals.—Goitre is not an affection peculiar to man alone (*Cincinnati Lancet and Clinic*). M. Adam, veterinary surgeon at Augsburg, has remarked that after staying a certain length of time in that city a number of horses were attacked with goitre. There are only a certain number of stables where goitre shows itself, all situated at the east of the city. It is impossible to determine the cause of it. Goitre is not rare with the dogs of Augsburg, and is unusually frequent with the inhabitants of that city. The disease does not prevail in Switzerland, however.

Epidemic of Whooping-Cough in London.—Toward the close of 1881 whooping-cough became epidemic in London, and it has since been very prevalent and fatal there. During the first thirteen weeks of this year there were 2,224 deaths from this disease, which is about three times the usual rate.

Disinfection by Bromine.—Dr. Wernick is said to have made the use of this powerful disinfectant practicable by employing a patent siliceous sponge, invented by Dr. Frank, and which is saturated with the bromine. A piece of this sponge left for a few hours in a closed room will completely disinfect it.

A New Treatment for Pruritus.—Dr. H. K. Steele, of Denver, Col., sends to the *Cincinnati Lancet and Clinic* a description of a new method of treating pruritus of vulva or anus: "The remedy is quinia sulphate, rubbed up with only sufficient lard to hold it together. The nearer you get the full strength of the quinia the more efficacious it will prove. Apply freely and thoroughly. It has proven a specific in my hands."

A New Way to Put Off Old Age.—Dr. William Schmöle, Professor of Pathology in Bonn, has written an ingenious work, entitled, "Wissenschaftliche Künste zur Verlängerung und Verschönerung des menschlichen Lebens," or "Scientific Method of Prolonging and Making Comfortable Human Life." He bases his method upon the hypothesis, that the condition known as old age is produced by a misproportion between the organic framework and inorganic constituents of the human body. In order to prevent this condition and preserve the elasticity of youth, it is only necessary to introduce some substance which will dissolve the excess of mineral matter and allow of its absorption and excretion. Such substances are the inorganic acids, and chief among these, citric acid, the next in value being lactic acid. Citric acid is best taken in the form of lemon-juice, and it is recommended that a person swallow the juice of from two to eight lemons daily, year in and year out! Such a practice also secures one against the attacks of rheumatism, which afflict old age. It also prevents the degeneration of the arteries and the calcifications of the vascular systems. Our speculative author also avers that many of the fevers and inflammatory diseases of old age are due to reflex and sympathetic processes. He states that a treatment which benumbs these reflexes will tend to ward off such complications. For this purpose he advises small and frequently repeated doses of acetate of morphia. The number of cases illustrating the effects of this scientific elixir vitæ are small. One person, who fed himself on lemons as directed, died at the age of 110, and then his death was an unnatural one.

German Medical Professorships.—In place of the late Professor Duchek, who held the Chair of Internal Medicine in Vienna, either Professor Erb or Professor Nothnagel will be called. In Professor Klebs' place, at Prague, Professor Eppinger, his assistant, is to be nominated.

The Number of Students at the Vienna University during the past semester was 4,823. Of these, 1,412 were medical students, being double the number present four years ago.

Mortality from Excision of the Thyroid.—In a review of the subject of extirpation of the thyroid for goitre and other troubles, Kocher (*Correspondenz-Blatt*) gives the following statistics: Among 193 cases, in which the gland was not affected by any cancerous growth, the mortality was 23. Among 21 cases of cancerous disease, the mortality was 13. Of the first series Professor Billroth removed 50, with a mortality of 6; Kocher 38, with a mortality of 5.

Successful Vaccination after Small-pox.—E. C. Carter, M.D., Assistant Surgeon U. S. Army, writes: "Two soldiers, who had had small-pox, were successfully vaccinated at Angel Island, Cal. Only one, however, had well-marked variola scars."

The Late Erskine Mason, M.D.—Resolutions.—At the stated meeting of the New York Pathological Society, held May 10, 1882, the following report was read and unanimously adopted:

This society has heard with profound regret of the death of Dr. Erskine Mason, at one time its presiding officer. For many years an active member, he took a deep interest in the work of the society, and was a regular attendant at its meetings, presenting many valuable specimens, and taking part freely in its discussions. He will long be remembered for the clear and intelligent manner in which he presented his cases, and for the valuable lessons he deduced from them. By the death of Dr. Mason, this society has lost one of its most active and efficient workers, and a member who, by his kindliness of manner had endeared himself to his associates. Strong in his convictions, he was nevertheless always courteous in discussion to those who held dif-

ferent opinions, seeking the elucidation of the truth rather than endeavoring to enforce his own ideas. Strictly honorable in all his professional relations, he had won the respect of his brethren both as a man and as a surgeon. In him we have lost one who set us a bright example of energy and industry, of careful and thoughtful study, and of professional honesty and courtesy.

Resolved, That the above minute be entered upon the records of the society.

ROBT. WATTS,
J. H. RIPLEY,
E. L. KEYES,
Committee.

INTESTINAL OBSTRUCTION.—Dr. J. C. Dreher, of Smithville, Ohio, writes: "In reading the article 'On the Treatment of Some Forms of Intestinal Obstructions by Opium,' by Prof. George E. Post, M.D., in the RECORD of April 22, 1882, I am reminded of a case which came to my notice a few years ago. Mrs. C——, seventy years of age, had an irreducible femoral hernia, intolerable pain, and fecal vomiting. Taxis, enemata, tobacco poultices, etc., proved unavailing, and an operation was decided upon, but the patient preferred death to the cutting. Tobacco poultices were again continued, and five-grain doses Dovers every three hours administered. On the fifth day of treatment, she had three or four spontaneous moves. All pain and sensitiveness of the parts ceased on the second day of the opium-treatment. Her recovery was rapid, and she is alive and well this day. The Dovers used in this case contained potas. bromide instead of sulphate, but of course the opium did the work."

FOUR MICROCEPHALI AND ONE CLINOCEPHALUS IN ONE FAMILY.—Dr. Tirizzi reports the cases of five children of a Catanian couple, of which four were microcephalic and one clinocephalic. Two microcephali are still living; the author dwells at length upon the history of one of these, a male, gives a short *résumé* of the history of the other, a female, and briefly refers to the remaining children. The male microcephalus has strange habits and very little intelligence, but his senses are unimpaired. He delights in running. In her tendencies and character the female differs altogether from the male. In concluding, the author avails himself of the cases described to combat the evolution theory, according to which man is derived from the ape; he considers a microcephalus not a type of man reverted to the primitive human form, but as a simple anomaly or aberration from the normal type. "We admit neither transformation, pantheism, or materialism," he writes. "Our ideas may be regarded as old and obsolete, but this is of little importance to us, inasmuch as distinguished men and men of profound thought hold the same opinions as we. Unless facts, carefully observed and well authenticated, and undisputable proof are offered to sustain other theories, we will not deviate the least from the path we have laid out."—*Annali Universi di Med. e Chir.*, June, 1881.

THE DANISH VETERINARY SOCIETY has offered a prize of 2,000 francs, and a second of 1,000 francs, for the best essays on the benefits to living animals which have resulted from vivisection. The essays may be written in Danish, Swedish, English, French, or German.

PROFESSOR ARLT, the venerable oculist and senior member of the Vienna Medical Faculty, celebrated on April 18th the jubilee of his seventieth birthday. Professor Arlt has kept in active practice up to the present time. He now retires as a teacher in the University.

ANALYSIS OF BITTERS.—Dr. H. W. Vaughan, State Assayer of Rhode Island, has made a report on the analysis of the various "bitters" found in the market, classifying them in three divisions: 1, beverages; 2, medicinal beverages; 3, reputed medicines. The percentage of alcohol in some of class 1 is as fellows: Hostetter's, 43.20; Baker's, 40.57; Drake's Plantation Bitters, 38.24; Wild Cherry, 35.89; Standard Wine Bitters, 25.49; Peruvian Bitters, 22.40; Sherry Wine Bitters, 22.40; California Wine Bitters, 18.20.

Those of the second class vary from 40.10 per cent. of alcohol in Atwood's Quinine Bitters to 16.68 in Luther's Temperance Bitters. Those of the third class, professedly designed as medicines, but very well suited for forming a taste for all kinds of strong drink, vary from very strong to very weak. For instance: Richardson's has 59.14; Warren's Bilious Bitters, 29.60; Atwood's Jaundice Bitters, 25.60; Puritan Bitters, 25.50; Hoofland's German Bitters, 20.85; Oxygenated Bitters, 19.23; Walker's Vinegar Bitters, 7.50; Pierce's Bitters, 6.36.

ENDOWMENT OF JEFFERSON MEDICAL COLLEGE.—A movement is on foot to secure a permanent endowment fund for the college. The subject was proposed at the Alumni meeting and referred to the Executive Committee. At the Alumni supper one member pledged himself to raise $1,000 before the next meeting of the association.—*Coll. and Clin. Record.*

THE MIDDLEMORE PRIZE IN OPHTHALMOLOGY.—We are requested to remind intending competitors for this prize that all essays must be forwarded by May 31st next, under cover, with a sealed envelope bearing the motto of the essay, and containing the name and address of the author, addressed to the General Secretary of the British Medical Association, 161A, Strand, London. The amount of the prize is £50; and the subject of the essay is "The Scientific and Practical Value of Improvements in Ophthalmological Medicine and Surgery Made or Published in the Past Three Years."

MEDICAL REGISTER OF NEW YORK, NEW JERSEY, AND CONNECTICUT.—Vol. XX. of this annual for the years 1882 and 1883, commencing June 1, 1882, has made its appearance promptly on time, and is full of the usual interesting material. The city list is increased by one hundred names, and a full list of all the apothecaries in this city and Brooklyn has been added. It is got up in its usual style, and reflects credit upon the indefatigable editor, Dr. W. T. White.

THE ABORTIVE TREATMENT OF BUBOES.—Dr. M. K. Taylor, Assistant-Surgeon, United States Army, describes (*American Journal of Medical Sciences*) a very successful method of treating buboes, adopted by himself. When the glands have reached a moderately large size, he freezes the surface with ether, seizes the gland between the fingers and injects about twenty minims of a carbolic acid solution (gr. iv. to ʒ j.) Pain and soreness leave very soon, and the patients are generally able to resume work within three or four days. Dr. Taylor has tested his method on as many as 150 cases. He has used it successfully also in non-specific enlargement of cervical glands.

Original Communications.

A STUDY OF NASAL CATARRH, BASED ON PATHOLOGICAL INVESTIGATION.

By F. H. BOSWORTH, M.D.,

PROFESSOR OF DISEASES OF THE THROAT, IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

TWO FORMS OF THE DISEASE, RHINITIS HYPERTROPHICA AND RHINITIS ATROPHICA, CONSTITUTING IN ITS LATTER STAGES THE SO-CALLED OZÆNA.

THAT our knowledge of nasal catarrh is based far more on clinical study than on pathological investigation is not surprising when we remember how rarely post-mortem examinations are extended to the nasal mucous membrane, and also that in those cases which demand the removal of diseased tissue this ablation has been usually accomplished by means of destructive agents. Since Dr. Jarvis introduced his ingenious snare écraseur, I have made very extensive use of his instrument in the nasal cavity, and in this manner have been able to remove portions of the diseased membrane *en masse*, and in such a shape that they have furnished me with sections for microscopical study in which the structure of the membrane has been absolutely unmutilated. I have thus secured specimens from all portions of the nasal cavity, and in all varieties and stages of catarrhal inflammation. Nasal catarrh is an unfortunate and indefinite name, but it has been dignified by such long-time usage that it is very difficult to abandon it. We may accept the term "catarrh" as defining the prominent symptom of the disease, viz., an inflammation characterized by a fluid discharge in distinction from a croupous or diphtheritic inflammation in which the exudation is membranous; but an excess of fluid discharge is also met with in syphilitic and strumous disease of the nose, and these diseases are ulcerative in character, and bear no relation whatever to catarrhal disease of the nose, and should never be classified in the same category. Excess of discharge is also a symptom of nasal polypus, fibroid, and other tumors, the presence of foreign bodies, etc., but these affections are not to be regarded as varieties of nasal catarrh.

On the other hand we may use the term nasal catarrh as defining the character of the morbid process which is going on in the nasal mucous membrane, viz., an inflammation of a catarrhal character, and this, it seems to me, is its proper significance. There still, however, remains an element of indefiniteness. By common consent the termination *itis* is used to designate inflammation, as bronchitis, etc., but as we proceed upward in the air passages, we stop at pharyngitis, and, dropping an excellent system of nomenclature, designate an inflammation of the lining membrane of the nose as nasal catarrh, and then loosely use the name to cover a number of totally distinct diseases. The Germans have adopted the name "rhinitis" to define an inflammation of the nasal mucous membrane, and in the interest of exactness it is to be desired that the name may be generally adopted, in our text-books at least. All inflammations of mucous membranes are either catarrhal, croupous, or diphtheritic. By common usage, when we use the name bronchitis, pharyngitis, etc., we refer to a catarrhal inflammation, while the latter varieties are designated by the prefix croupous, or diphtheritic. We may then understand rhinitis to define a catarrhal process. In my study of the pathology of the nasal membrane, I find that the whole subject of chronic nasal catarrh, so-called, may be embraced under two varieties, one of which consists in a true hypertrophy, while the other is characterized by atrophy of the membrane. Following the above nomenclature, these are:

First.—Rhinitis hypertrophica chronica.

Second.—Rhinitis atrophica chronica.

The first variety corresponds to what we usually call hypertrophic nasal catarrh. The second variety corresponds to what is usually called dry catarrh, and, in its later stages, ozæna.

For a better comprehension of the changes which take place in the membrane as the result of these morbid processes, the structure of the normal mucous membrane may be briefly described. That portion of the nasal cavities which is above the upper border of the middle turbinated bones is called the olfactory tract, while the lower portion is called the respiratory tract. The structure of the mucous membrane in these two regions differs quite markedly. In the olfactory region there is found a thick, soft membrane, containing numerous glands peculiar to itself, together with epithelial and olfactory cells, in which the olfactory nerve terminates. This region I believe to be rarely if ever involved in the morbid processes which characterize nasal catarrh.

In the respiratory region we find a mucous membrane which resembles more closely the ordinary membrane.

In Fig. 1 is shown a section of a typical mucous

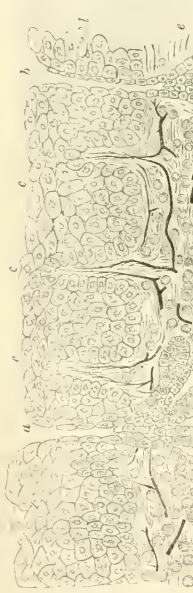


FIG. 1.—Section of a Mucous Membrane, drawn diagrammatically: *a*, submucous layer of connective tissue; *b*, muscular tissue; *c*, basement membrane; *d*, blood-vessels; *e*, closed follicles; connective and elastic tissue fibers, and marked by villi; *g*, epithelial layer; *d*, simple follicle; *e*, racemose gland.

membrane, drawn somewhat diagramatically. It is composed of three layers, an epithelial layer (*c*), the

mucosa proper or adenoid layer (*f*), and the submucous connective-tissue layer (*a*). In the respiratory tract of the nose the epithelial layer is composed of ciliated epithelia, with the ciliary vibratory movements toward the posterior nares. The mucosa proper is composed largely of connective tissue, with a few fibres of elastic tissue. In this layer is found a large number of blood-vessels and nerves, together with a numerous distribution of glands of the acinous variety (*d*), but with more tortuous outlets. It is in the submucous layer, however, that the most striking changes from the simple type are found. Kohlrausch,* in 1853, described what he supposed to be merely large venous sinuses, as existing in this layer of the membrane. In 1873, Bigelow,† of Boston, demonstrated that these so-called sinuses or loops of Kohlrausch composed a true erectile tissue. The observations of Kohlrausch were made by injecting the jugular vein, while Bigelow inflated the tissue locally, demonstrating the existence of a true erectile tissue, in the same manner as is done with the penis.‡

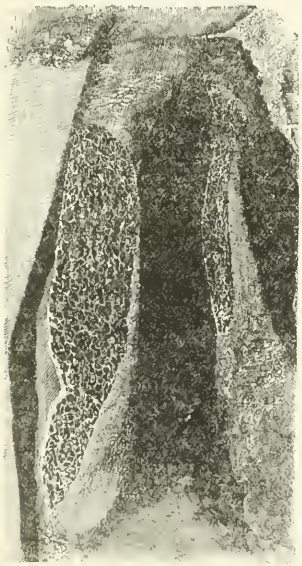


FIG. 2.—Section of the Cavernous or Erectile Tissue of the Middle and Lower Turbinated Bones, inflated and dried, × 2 diameters. (Bigelow.)

This tissue is very beautifully shown in Fig. 2, from Bigelow's original article, the parts having been first inflated, then dried, and the section made. This cut, it may be mentioned, also shows why, after cutting operations upon this tissue resulting in hemorrhage, the use of hæmostatics is utterly futile, as has been my almost unvarying experience, and that the only resort for the arrest of the bleeding is in the use of plugs.

Returning now to the morbid changes as the result of inflammatory processes, I made a large number of cuttings by the snare from various portions of the cavity, and found that the changes varied but little in the different regions.

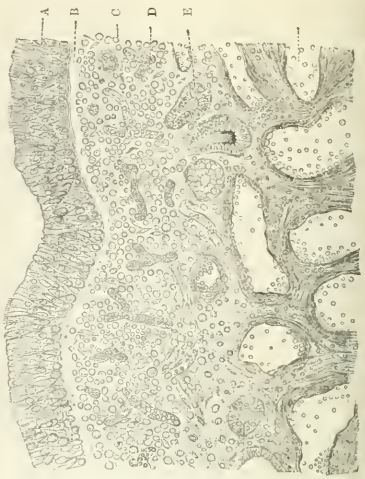


FIG. 3.—Rhinitis Hypertrophica Chronica: A, epithelial layer; B, limiting structureless membrane; C, adenoid layer; D, blood-vessel filled with blood; E, acinous gland; F, venous sinus, composing the so-called erectile tissue.

RHINITIS HYPERTROPHICA.

The accompanying cut, Fig. 3, represents a section of a mass removed from the posterior portion of the lower turbinated bone. The changes may be described as follows: The whole mucous membrane is markedly thickened and deeply corrugated. The epithelial layer is augmented or increased in width. The outermost layer of epithelium in specimens from middle turbinated bones exhibit fine ciliæ, while in sections from the lower turbinated bone the ciliæ are occasionally wanting in places. There are deep valleys running downward into the adenoid layer which are filled with stratified epithelia. The latter consists of elongated epithelia, ten to twelve layers in diameter. The layer nearest the adenoid tissue is occupied by distinctly developed large columnar epithelia, which, especially where they go to fill the valleys, are very large, and composed of several strata. The boundary line between the epithelia and the adenoid tissue is everywhere well marked, and in some places there is even present a layer without distinct structure, the so-called structureless membrane.

The *adenoid layer* is very wide, and is composed in most of a myxomatous reticulum, with numerous lymph-corpuscles, while in some portions the lymph-corpuscles are very scanty, and the whole mucosa is composed of very dense decussating bundles of fibrous connective tissue. The mucosa is in all instances richly supplied with relatively wide capillary blood-vessels, mostly filled with blood. The acinous mucous glands are very numerous and evidently increased in size and number. They are composed of cuboidal epithelia, which, in many instances, exhibit the features of inflammatory corpuscles. The ducts

* Müller's Archives, 1853, p. 149.
† Boston Medical and Surgical Journal, April 29, 1875.
‡ Satterthwaite: Manual of Histology.

of the glands are traceable into the valleys on the surface of the membrane, where their columnar epithelia blends with that of the outer epithelial coat.

The *submucous coat*, beneath the adenoid tissue, consists of a broad layer of either myxomatous, or fibrous reticular structure, in which there are present enormously enlarged blood-vessels of a venous character. These veins are so abundant that they compose a true erectile tissue. The connective tissue, however, between these large veins is broader than is usually found in true cavernous tissue, and is supplied with bundles of smooth muscular fibres. The muscle-coat of the veins is also increased in breadth.

The arteries, though scanty, are all of a wavy course, constituting the so-called helicine arteries. The submucous layer also contains a number of racemose mucous glands, increased in size. The presence of these glands in this layer of the membrane is, I believe, anomalous. Around these glands there are found, as a rule, heaps of lymph-corpuscles.

The characteristic features of hypertrophy of the nasal mucous membrane, then, may be briefly summarized as follows :

First.—Increase of the covering epithelium, without desquamation.

Second.—Increase of the adenoid layer and its capillaries, with stagnation of blood, together with a new formation of fibrous connective tissue replacing the adenoid layer.

Third.—Increase of the racemose glands, both in the adenoid and submucous layer.

Fourth.—Hypertrophy of the connective tissue between the enlarged veins in the submucous layer.

Fifth.—In advanced stages of the hypertrophic process, an absence of lymph-corpuscles, they having evidently been transformed into connective tissue.

There are certain deductions which it seems to me may be clearly drawn from the study of these morbid changes. In the early stages of the disease we have to deal with merely an excessive secretion from the diseased membrane. As the later morbid conditions develop, we find two new features added, viz.: the connective-tissue hypertrophy, resulting in a permanent stenosis; and the dilatation of the venous sinuses, resulting in a liability to constantly recurring but temporary stenosis from turgescence of these vessels under the influence of various irritating causes. The rational treatment of hypertrophic nasal catarrh should therefore be based on the recognition of these three conditions: (1) excessive discharge; (2) stenosis from structural hypertrophy; (3) temporary stenosis from turgescence of the venous sinuses.

1. The proper management of the excessive discharge in the use of the various cleansing and astringent solutions, and the methods by which they are best applied, is familiar to all, and my own views and methods I have given in my work on "Diseases of the Throat" and elsewhere.

2. The treatment of the structural stenosis by the use of destructive agents, such as acetic acid, chromic acid, the galvano-cautery, or by Jarvis' snare écraseur has also been sufficiently described; and I have nothing new to offer. My microscopic examinations, however, it seems to me, show conclusively, that when we have structural changes in the nose, such as have been described, we cannot accomplish their absorption by medicated solutions, but that the tissue must necessarily be destroyed or ablated. As I have shown, in comparatively early stages of the disease there is an extensive transformation of lymphoid cells into connective tissue, and in the later stages these lymphoid cells have given place entirely to connective tissue; and certainly when the latter has occurred the only resource is in destruction or removal.

In a paper read before the American Laryngological Association, in June, 1880 (*Archives of Laryngology*, April, 1881), I called attention to the value of glacial acetic acid as a destructive agent in hypertrophy of the nasal mucous membrane. Since that time I have used this agent to the exclusion of all others, and am disposed to speak most positively of its value above all other canstics. So excellent are the results that I have obtained, that I regard it as even more efficient than the galvano-cautery, and certainly far less painful. In those cases which admit of the use of the snare, that should be used. In those cases in which the snare cannot be used, I prefer the acetic acid.

3 When there is a constantly recurring but temporary stenosis, due to a sudden turgescence of the venous sinuses, I think we may infer that the condition is due to an impairment of tone in the muscular coat of the veins, by which, under the influence of various exciting causes, such as a damp atmosphere, etc., the vessel-coats relax and the vessels become distended, in one or both nasal cavities, or perhaps alternating from one to the other In those cases in which this condition is prominent, I have found excellent results from the use of a very mild faradic current. The electrode which I have devised for this purpose has served excellently well in my hands. It is equally adapted for each nasal cavity, and can be applied to the middle or lower turbinated bones. The current should be applied, as a rule, twice each week, and for about two to three minutes in each cavity.

RHINITIS ATROPHICA.

The accompanying cut, Fig. 4, represents a section of membrane removed from the middle turbinated bone in a case of atrophic, or dry catarrh, which had gone on to the development of fetid discharges. The change may be described as follows:

The *epithelial layer* is considerably decreased in width. The outer nearly smooth surface is occupied by a relatively broad layer of flat epithelia, partly in a state of desquamation, and entirely devoid of ciliæ. Below this there is found stratified cuboidal epithelium, displayed in five or six layers, while the portion nearest to the adenoid tissue, in some portions at least, is occupied by a row of columnar epithelium. Where the latter is plainly visible, the boundary line between the epithelial coat and the adenoid tissue is distinctly marked. In many places, however, the boundary line cannot be traced, and the adenoid seems to blend with the covering epithelium, while the latter exhibits features similar to those of the adenoid tissue.

The *adenoid layer* is thinner in diameter than normal, and is occupied by crowded lymph-corpuscles in a very delicate fibrous reticulum. The capillary blood-vessels are small, scantily distributed, and, as a rule, quite empty. The acinous glands are small, and evidently diminished in number. They are lined by a short columnar or cuboidal epithelium, while their ducts exhibit, around a large calibre, well-defined columnar epithelium. Around the scanty acinous glands there are heaps of lymph-corpuscles.

The *submucous layer*. — The adenoid layer

merges into a layer of a more fibrous construction, with relatively less numerous lymph-corpuscles. There is a larger number of blood-vessels found in this layer, which on an average exhibit a wider calibre than those of the adenoid tissue.

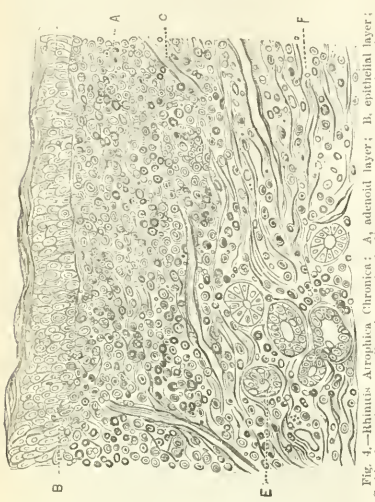


Fig. 4.—Rhinitis Atrophica Chronica: A, adenoid layer; B, epithelial layer; C, blood-vessel empty; E, acinous gland; F, submucous connective-tissue layer, the remains of the previously existing erectile tissue.

The prominent features of the atrophic process are briefly as follows:

First.—Decrease of the covering epithelium, with profuse desquamation.

Second.—Decrease of the adenoid layer, with lack of blood-vessels, together with destruction of the acinous glands.

Third.—A total disappearance of the venous sinuses of the submucous layer of the membrane.

In brief, we find here an atrophy of the mucous membrane in which the morbid process is not due to a connective-tissue hypertrophy encroaching on the glandular structures of the membrane, but rather to the transformation of epithelial structures into inflammatory corpuscles, together with an active epithelial desquamation from the surface of the membrane and the lining of the acini.

As has been seen, the follicles are surrounded by heaps of lymph-corpuscles, but there is no evidence of transformation of these corpuscles into connective tissue, showing thus that the inflammatory process is most marked in the neighborhood of the acini, but that it does not develop into a hyperplastic process. The morbid changes are therefore atrophic from their outset, and bear no relation whatever to the hypertrophic form of disease.

Atrophic catarrh commences in the very large majority of cases in early childhood, but its progress is so exceedingly slow and insidious that it may exist for several years before it gives rise to any prominent symptoms. In the early stage it consists merely in a moderate coryza, with no tendency to the dryness or formation of incrustations which characterize its later stages. As it develops, and the glands become destroyed, the mucous membrane commences to feel their loss. The supply of mucus becomes deficient, and the natural result is that it dries upon the surface of the membrane. There is thus formed on the convexity of the turbinated bones a thin, dry pellicle of inspissated mucus, resembling in its appearance, and also in its action, a film of collodion. In drying it contracts, and thus clings closely to the rounded turbinated bones, extending into the sinnosities beneath them. This condition gives rise for the time to more or less irritation in the parts, with a feeling of burning or prickling, which lasts until the small incrustations may be dislodged. These crusts may recur again and again for weeks, or longer, and the parts improve and the symptoms disappear for a time. The further progress of the disease shows a tendency to more frequent recurrence of these incrustations; they adhere more closely and remain longer in the cavity, and finally a new development of symptoms sets in. As these crusts form on the surface of the turbinated bones, and remain for days even at a time, the secretion of mucus goes on beneath them, but being protected by an air-tight covering it remains fluid until it has forced or broken its way out, thus lifting up the incrustation. In this way the dry mass is builded up from beneath. Moreover, the imprisoned mucus soon commences to degenerate into pus, and become decomposed. We thus find a new symptom commencing to show itself in the stench which these decomposing masses emit.

It is easy to understand the progress of the disease thus far: a loss of glands giving rise to inspissated mucus, this drying and adhering to the convexities of the bones, and being retained thus for days, decomposing and giving rise to an odor; but there is another prominent feature of the late stage of the disease which, as far as I know, has not been satisfactorily accounted for, and that is, the atrophy of the turbinated bones. If we examine the nasal cavities of one who has suffered from this disease a number of years, we find them exceedingly roomy, and looking through them see plainly a considerable area of the wall of the pharynx. This roominess is due to an almost total disappearance, in many cases, of the lower and middle turbinated bones. These bones are seen simply as small cord-like projections from the outer wall of the cavities. In cases in the earlier stages, of course, the atrophy of the bones may not have advanced so far. This condition I believe to be caused by the pressure exercised on those bones by the drying and contraction of the inspissated mucus, and is an illustration of what we very often see in disease, viz., comparatively trivial causes acting through a long number of years resulting in morbid changes apparently disproportionate to the vigor of the exciting cause. This atrophy is undoubtedly due, in part, to this direct pressure upon the bone, but its mode of action is, of course, to interfere with the nutrition of the bone by the pressure upon the membrane and the submucous tissue which, in this region, forms the periosteum, or, at least, is merged with it.

Hartmann, Gottstein, and Fränkel speak of this condition of the turbinated bones as a lack of development rather than an atrophy. I have found that, as a rule, the extent of the atrophy of the bones is an indication of the duration of the disease, and that the complete atrophy, which characterizes the later stages of the disease, is only met with in cases which have lasted many years, while, in cases of a few years' standing, this wasting of the bone is not prominent.

As the secretions become pent up, and the mucus becomes imprisoned beneath the crusts, we find

that the mucous discharge becomes converted into a purulent one. As a rule, when a mucous discharge occurs in a closed cavity, as the vagina or urethra, it becomes purulent, the secretion seeming to infect the membrane, exciting a renewed activity in cell proliferation, by which the discharge is converted into a purulent one. This, it seems to me, is what takes place in the nasal cavity under the conditions above described.

Another symptom of ozæna may be here alluded to, and that is the occurrence of a dry pharyngitis. This symptom is very constant, and its occurrence should always suggest an examination of the nasal cavity for the probable existence of an atrophic catarrh. The method of its development is very simple. The accumulation of dry crusts in the nose, with the atrophy of the turbinated bones, robs the nares of their normal function by which the inspired air is rendered warm and moist. Hence the air which reaches the pharynx is abnormally dry, and, consequently, its membrane is soon deprived of its moisture. The pharyngitic sicca, therefore, is a symptom, artificially produced, rather than an extension of the disease.

The fetor I believe to be due entirely to retention of secretion; that this is true is shown by the fact that it is removed entirely by cleansing, nor does the odor return until there is a new formation of incrustations. We thus find the fetor developed from a purely catarrhal process, without ulceration or necrosis, and due entirely to retention of secretions and their subsequent decomposition. A fetid discharge never occurs in the hypertrophic form of catarrh, but is only met with in the atrophic form. As we have seen, the stench is only a symptom of the late stage of the disease, but still it is the symptom which has given the name to it of ozæna. The name is objectionable, and should only be accepted as applying to a class of diseases in the nose which are attended with stench, including syphilis, scrofula, etc. At the recent medical congress, in London, the subject received a very thorough discussion, but it only served to bring out various divergent opinions.

Krause, of Berlin, reported the results of two autopsies on patients suffering from ozæna or atrophic catarrh, in which microscopic changes were found almost identical with these I have given, with the exception that he finds large numbers of fat-globules, the result of cell disintegration. The secretion of this fat, its retention beneath the crusts, and its further change into the fatty acids, he says, accounts for the fetor which attends the disease. Loewenberg suggests that the fat-granules which Krause describes are micrococci. Certainly, the existence of decomposing fat would not give rise to the peculiar odor of ozæna.

E. Fränkel finds numerous bacteria and micrococci in the discharges, and reasons that the fetor is due to their presence. This, it seems to me, is simply asserting the existence of decomposition, which is always attended with the development of micrococci.

Zaufal attributes the development of ozæna to the peculiar formation of the nose, which favors the accumulation of the secretions. The peculiar formation of the nasal cavity in ozæna is a result of the disease, and not a cause, the atrophy of the turbinated bones occurring as a result of the atrophy of the membrane, as I have already shown.

Fournier believes that the odor of ozæna is due to the secretion of the glands, and that the fetor is a secretion peculiar to the glands of the nasal mucous membrane, and that it is made prominent by the inflammatory process. This is ingenious, but I believe that it is a universal rule that a fetid secretion does not occur; an excretion may be fetid, but not a secretion. The development of a fetor occurs after the matter is secreted. Fournier also describes a dry and a moist form of the disease. These I believe to be one and the same, the secretion of purulent matter being often coincident with the formation of incrustations.

Watson recognizes three forms of ozæna:

First.—The eczematous or scrofulous form.

Second.—The phthisical or lupoid form.

Third.—The syphilitic form.

I cannot but think there is an element of confusion here in classifying syphilitic and scrofulous disease of the nose, which I believe always to be ulcerative in character, with the atrophic disease which I have described, and which I believe to be purely local and uncomplicated with any constitutional taint whatever.

Causes.—I know of no cause for the disease other than taking cold; but why in one case this should lead to desquamation of the epithelial lining of the glands and their subsequent destruction, while in another case it leads to the development of a hypertrophic process, I cannot say. I believe the disease to be a purely local one, and in no way connected with any constitutional condition or diathesis.

As a rule, patients suffering from the disease enjoy thoroughly good health. Indeed, it is the rare exception to meet with it in one suffering from impaired health from any cause. This statement I believe to be contrary to the generally accepted belief, but I make it advisedly. Certainly, it holds true in my own experience, and it has been a large one, covering several hundred cases. I have sought also for evidences of syphilis and scrofula as a possible cause, but I have not as yet been able to trace a single case to either of these taints. It may involve one or both nasal cavities, or it may involve only a portion of one cavity. It may attack the middle or lower turbinated bone, one or both. We find occasionally hypertrophy in one cavity and atrophy in the other. I have seen a few cases of hypertrophy of the lower turbinated bone with atrophy of the middle. A constitutional condition will scarcely explain these vagaries. It has been a favorite idea to regard the disease as a manifestation of scrofula. As a rule, patients suffering from atrophic catarrh enjoy perfect health. Furthermore, it is exceedingly rare to find it in one suffering from any of the manifestations of scrofula. With syphilis it has absolutely no connection. Syphilitic disease of the nose consists in ulceration and necrosis. I have never in a single case of atrophic catarrh found ulceration. The mucous membrane is absolutely unbroken. In this connection I may say that for many years I have been in search of the so called ulcers in catarrhal diseases of the nose and throat not due to syphilis, scrofula, or one of the constitutional taints, and that I have yet to find the first one. By the term ulceration should be understood a solution of continuity with progressive waste of tissue. I have examined many hundreds of cases, and by this I mean I have seen the whole cavity satisfactorily, and I have never seen any ulceration which was not due to a constitutional condition, excluding, of course, those due to the presence of foreign bodies.

Diagnosis.—The diagnosis in this disease will be made, as a rule, by an examination through the nos-

trils. In the early stages there will be seen adhering to the lower or middle turbinated bone a grayish semi-transparent membrane with a wrinkled, parchment-like or shrivelled aspect. The cavity will be seen to be fairly patent. In the later stages there will be seen either the broad, roomy cavity, before alluded to, with the shrunken, cord-like turbinated bones, or there will be brought into view a greenish yellow mass of dried muco-pus of unsightly appearance and unsavory odor, which more or less completely obstructs the cavity and prevents a view of the parts beyond. If this be removed and the cavity cleansed, there will be found the condition before described of a roomy cavity and shrunken, turbinated bones. The diagnosis is based on the elimination of ulcerative disease; hence, after cleansing it will be comparatively easy to discover the absence of any ulcerative process.

Treatment.—The first indication in the treatment of the disease is of course the thorough cleansing of the cavities by the removal of all the incrustations. In the accomplishment of this end there is no especial virtue in any remedy or local agent. The literature of the subject embraces a formidable array of drugs, among which are prominent carbolic acid, salicylic acid, boracic acid, permanganate of potash, phosphate of soda, bicarbonate of soda, thymol, borax, etc. The essential requisites of a good cleansing solution are secured by any solution which is alkaline and disinfectant. The fluid should be alkaline for its solvent action upon mucus. It should be disinfectant in order to neutralize the results of the process of decomposition which is going on in the retained secretions. Any fluid, then, possessing these qualities is an efficient cleansing solution. The formula I generally prefer is the following:

℞. Acidi carbolici	gr. xij.
Sodæ bicarb.	ʒ ss.
Sodæ biborat.	ʒ j.
Aquæ	Oj.

M.

Of quite as much importance is the method by which the cleansing is accomplished. The most efficient douche we possess is the ordinary post-nasal syringe. By means of this instrument a stream can be driven with great force through the cavities. In ordinary cases this is sufficient to thoroughly detach all the crusts, and cleanse the parts. In advanced cases, however, it will be necessary to use a probe with a pellet of cotton. This can be passed through the nostril and along the turbinated bones, thereby separating the crusts, after which they can be easily washed out with the syringe. Occasionally it will be necessary to throw a stream through the nostril by means of an ordinary ear-syringe. The essential point is to remove all secretions from the nose, and the success of the manipulation can only be determined by repeated inspections by means of a good illumination, and with the anterior nasal speculum in place. After the parts are thoroughly cleansed, the next step consists in the application of a stimulant agent. If the disease is essentially an atrophic process, and the fetor is due to a process entirely outside of the membrane, then the rational treatment and the one directly curative of the disease in the membrane proper, is to stimulate the parts to a better performance of their normal function, viz., the secretion of mucus.

Gottstein, in the *Berliner Klinische Wochenschrift*, No. 4, 1881, advocates the use of the cotton tampon for the promotion of secretion and the correction of fetor in atrophic rhinitis. His plan consists in packing pellets of cotton between the turbinated bones and the septum, and allowing them to remain twenty-four hours. His paper has been the subject of much comment, and has excited no little interest since its publication. The plan is a novel one, certainly, but it seems a somewhat cumbersome and roundabout way of accomplishing a very simple purpose. It is, moreover, attended with no little discomfort, as it involves a plugged-up nose for the twenty-four hours. What is accomplished by Gottstein's plugs is simply the stimulation of the membrane by the irritating presence of a foreign body. A flow of mucus is necessarily excited, and of course the fetor corrected, for the cause of the fetor in retained secretion no longer exists as long as the profuse discharge of mucus continues. Gottstein's plan, therefore, is rational in its action, but we can accomplish the same end by means much more simple, more thorough, and with much less discomfort to the patient. It is alluded to here mainly on account of its originality, and from the fact that it recognizes the main indication for treatment in stimulating the membrane.

After the thorough cleansing of the cavities, therefore, there should be applied a stimulating agent. For this purpose I know of nothing better than Galanga. This should be applied in the form of powder and by means of the Smith powder insufflator. Another almost equally valuable agent is Sanguinaria, applied in the same manner. I have used many different remedies, but I know of none possessing the same valuable qualities as the above. They stimulate the membrane without possessing too irritant qualities. By their action a flow of mucus is excited, which not only supplies the deficient moisture to the membrane, but also does more: it seems to flush all the conduits of the membrane, as it were, and wash out the worn-out detritus, cleanse the glands of their exfoliated epithelium, and restore a healthier action to the diseased secreting apparatus. If the glands are destroyed they cannot be restored but there unquestionably remains a large number of glands in the membrane whose proper function is hampered, and these undoubtedly can be restored to a healthier activity, and this is all that can be hoped for at the commencement of treatment.

This plan should be carried out faithfully every day. In this manner the fetor is entirely arrested—for, as a rule, fetor cannot arise from secretion retained no longer than one day—and the patient entirely and immediately relieved of one of the most distressing features of the disease. In the course of a few weeks it will be found that two days may elapse, and then three, without treatment, the rule being that the formation of incrustations must be arrested from the outset, and that the intervals of treatment must be regulated by the length of time which a patient may be without the treatment without the formation of crusts in the nose. In addition to the treatment at the hands of the physician, the patient may use the cleansing solution already given daily at home, by means of the post-nasal tube attached to a fountain-syringe. This is much better than the Weber nasal douche, in that the parts are more thoroughly bathed. In many cases, however, it will be difficult for patients to learn to introduce the post-nasal tube, in which case they may use the ordinary anterior douche. I have never found the use of this to be attended with danger to the ear; certainly in this form of catarrh. If there is any objection to the douche, the Delano or Goodyear

atomizer may be used. The object to be accomplished is to soften and moisten the membrane daily.

By the above plan of treatment, I believe we accomplish all that can be done for these cases. The question presents, Can we cure them? Fränkel, of Berlin, very frankly says: "A cured ozæna is unknown to me," referring to the atrophic catarrh. In the early stage of the disease, before the fetid symptom has set in, I have seen cases recover. In the advanced stages, characterized by fetor, and in which the turbinated bones have almost entirely disappeared, I have not seen a case cured, if, by a cure, is meant a condition secured in which there remains no necessity for any measure of local treatment. All cases can, I believe, by thorough and painstaking treatment, be brought to that point when, by the use of very simple means, the ground that has been gained can be secured, and the patient be kept entirely free from any annoying symptoms whatever. If the physician, by local treatment, has so far helped a patient suffering from atrophic catarrh, with fetor, that, by the daily use of the post-nasal douche at home, he is entirely free from both fetor and incrustations, nothing more can be accomplished. The patient must be content to place his nasal cavities in the same category as his hands and teeth, as something to be cleaned with his morning toilet. For this purpose, a solution of common salt answers every purpose. This may be used by simple insufflation from the palm of the hand, by the Weber douche, by the post-nasal douche, or by a Goodyear atomizer. The instrument used is of little importance provided the whole membrane is bathed and softened and moistened.

This may seem a poor result, but it is certainly a great deal gained, and is something, moreover, which I think can only be attained by the aid of a physician. A patient cannot accomplish it by using syringes and douches himself. The crusts adhere so tenaciously in the sinuosities of the nasal cavity, that it is impossible to detach them by means of syringes or douches. These cases should be treated, then, with painstaking and care, but with definite ideas as to what we can accomplish, and, even if the cure is not a radical one, the partial success attained is well worth the effort. Moreover, I think entire candor with our patients in the matter of prognosis will be better than to lead them to expect an entire and thorough cure when our hopes of such a result are based on such insecure grounds.

NOTE.—I am much indebted to Dr. Charles Heitzman, of this city, for valuable aid in making the microscopic examinations above described.

I should also state that the above report of the pathological changes in nasal catarrh formed part of a paper read by myself at the International Congress in London last summer.

26 WEST FORTY-SIXTH STREET, NEW YORK.

CHRONIC RHEUMATIC ARTHRITIS IN A DOG.—At the Pathological Society, of London, recently, Dr. Norman Moore exhibited a specimen showing bony outgrowths on the carpal and metacarpal bones, with ankylosis. The disease was of long duration. It probably caused great pain, and was believed to be one of the commonest causes of the howling of dogs at night. The President (Dr. Wilks) said that the dogs of the Hospice of St. Bernard were very subject to chronic rheumatism, on account, the monks believed, of their exposure to cold.

SOME PRACTICAL SUGGESTIONS IN THE TREATMENT OF SPINAL CARIES.*

By AP. MORGAN VANCE, M.D.,

LATE INTERNE HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK; ORTHOPEDIC SURGEON TO KENTUCKY INFIRMARY FOR WOMEN AND CHILDREN.

EVERY practitioner of experience knows the importance of the closest attention to the "small things" in surgery. Nowhere is the observance of detail so necessary as in the orthopedist's department, and it is especially so in the treatment of spinal caries. One will hear this plan of treatment and that plan advocated, viz., the various forms of plaster and steel braces, with modifications; but it is not the form of apparatus used that insures success, or results in failures; it is the degree of skill with which applications are made. In my opinion, good results can be obtained with any of the recognized forms of apparatus if properly applied and afterward attended to by the surgeon himself. The two old sayings, "What is worth doing at all, is worth doing well," and "What you want well done, do yourself," are nowhere better exemplified than here.

It is my purpose in this paper to give some practical points in the treatment of this ailment, culled from experience.

The diagnosis, as a rule, is easily made, for you are not called until deformity has taken place. Before this stage of the disease, the diagnosis is not difficult, though, of course, there are exceptional cases—especially if either extremity of the column is involved. Given the diagnosis, what shall the treatment be? The indications are to secure as perfect rest as is possible to the diseased structures, and this can best be secured by mechanical appliances. The splint or brace that attains the object as well as any other, and at the same time requires the least attention in keeping it in such repair that the indications can be continuously met, and has the fewest objections to its employment, that form of apparatus is the one to be used. So far as my own observation goes, there has not been proposed any splint that is free from objections. A discussion in this connection of the two principal forms—the steel brace and plastic dressings—will not be out of order. The chief objection to the use of the former is that, as a rule, the surgeon is not mechanic enough to construct the instrument, or even to give it the proper attention after adjustment, and he consequently requires the assistance of the instrument maker. This individual has his own ideas, and these always conflict with those of the medical man, thus giving to the machine when constructed and applied to the patient a "hybrid" character that may or may not fulfil the indications. The mechanic is paid for his work, the case is turned over to the mother with the usual result, and the disease slowly progresses with the additional torture which a misapplied brace causes. This is in private practice; but in hospital, where one can daily observe the case, and can adjust the instrument with an eye to all the indications, the result is different, and very good results are often obtained. There are, of course, other minor objections, but they can be easily overcome.

The objections to the latter are manifold; but after a large experience with both forms I believe

* Read before the Kentucky State Medical Society, Louisville, April, 1882.

the advantages which the plastic dressings possess over the steel are undeniable, and sufficiently answer all criticism. It is unnecessary to note in this connection the progress that has been made within the last decade. The plaster jacket, as applied by Dr. Sayre—its greatest advocate—has, to my mind, a great many defects. These have occurred to me in my own practice, as well as from the observation of cases in the hands of fellow practitioners. In many instances the failure depends not upon the jacket, but upon its improper application. To many men the one thing necessary, be the disease located where it may, is to get the child's body enveloped in a plaster casiug. The following case will illustrate this point: A girl, fourteen years of age, with sacro-lumbar caries, wore a splint, the lower border of which reached only to the upper border of the deformity. I have seen also several cases of disease in the upper dorsal, where the upper border of the jacket was above the kyphosis, and not even supplemented by a head support. I refer to these simply to relieve the apparatus of the odium of failure. Cases have come to me in which the splints—that had been applied by men high in our calling—were doing absolute injury instead of giving the required rest in the comfortable manner described by the advocates of this plan. Of the plaster jacket, as it is usually applied, I may be pardoned for the following suggestions:

Never suspend a patient with caries of the spine. It cannot possibly do good, and may do much harm.

Do not use any dinner or respiratory pads. The use of these pads, in my opinion, is a great mistake, and in many cases they interfere with the proper support.

The plaster jacket should be renewed every three or four weeks.

Use a head-support whenever the disease is above the sixth or seventh dorsal vertebra.

Apply the jacket while the patient is lying upon a hammock, after the plan of Mr. Davy, of London. The advantages of this method will be referred to farther on.

This splint cannot be used carelessly. Each case must be studied individually, and this must be kept up after the brace is fitted. If this rule is not followed, trouble will come sooner or later. Excoriations, increase of deformity, and abscesses will appear without your knowledge.

To meet the objections, a number of modifications have been introduced within the past five or six years. One of the most important is the substitution of removable splints of lighter material.

In the summer of '77 the writer devised and first used the removable paper brace. Since that time modifications and improvements have suggested themselves, so that to-day I am able to exhibit what I believe to be that appliance which will meet all demands in the treatment of the disease, and against which fewer objections to its use can be urged than against any plastic dressing yet proposed. The results are certainly as favorable as could be reasonably expected. It is requisite that a cast of the trunk be first obtained by plaster-of-Paris. The process is simple, and the details are already given in my original article in this journal (June 21, 1879), and referred to again at the last meeting of this society. They are substantially as follows: In order to cause the plaster to set very quickly, a tablespoonful of alum should be added to the quart of water. The plaster jacket is then applied in the usual way, and it can be almost immediately removed by a vertical incision in front. The cut edges should be brought together after its removal and fastened in apposition with twine. Place the jacket thus removed on a table, and render it water-tight by plastering around the base and up the incision. Partially fill with bricks, or other solid material, in order that less plaster may be employed in making the cast, the spaces being well filled with plaster of the consistency of thick cream; the external jacket can be removed within ten or fifteen minutes. First, grease the cast thoroughly, to prevent any moisture from the plaster retarding the drying of the paper jacket. Secondly, apply an ordinary roller to protect the brace from grease, and to give a smoother surface. Thirdly, let Canton flannel be fitted tightly and smoothly over the cast, and secured by a seam in the back. This forms the lining of the brace to be constructed. Fourthly, apply with a common painter's brush the glue, consisting of two parts of Irish glue, two parts of oxide of zinc finely powdered, four parts of hot water. The Irish glue is first dissolved in water. The addition of one part of potass. bi-chromate to fifty parts of glue renders it more impervious to water. The glue thus prepared will keep indefinitely, and is always ready for use by simply reheating it. Fifthly, the next step is to apply horizontally, beginning at the bottom of the back, strips of brown Manilla paper, one and one-half inches in width, previously coated with glue. The paper is of moderate weight, such as is used by mechanical draughtsmen. The strips are long enough to reach a little more than half-way around the cast, and one overlaps the other about half-way in going from below upward. Having finished the back, cover the front in a like manner, lapping the ends of the sides, so as to give support where it is most needed.

Narrow steel springs, such as are used in hoop-skirts, two inches shorter than the cast, are placed vertically at intervals of one and one-half inches, and held accurately to the cast by means of strong flax-thread wound around the whole.

Another coating of glue is now applied, and a second layer of paper slips placed *vertically*, lapping as before. A few turns of thread will secure accurate adaptation to the cast; then a thickness of heavy linen or duck to add toughness and strength. A third coating of glue followed by a roller tightly drawn and smoothly applied completes the process. When dry the brace is removed by cutting down the front and springing the whole off the cast. Perforations by means of an ordinary penknife to the desired extent are made, care being taken to avoid the steel springs. Strips of heavy leather one-half inch in width, with metal eyelets one inch apart, are sewed half an inch from the edge in front, and when applied to the patient double laces are used. The edges of the splint should be neatly bound with leather. The apparatus is applied by springing it open enough to admit the patient's body, and should be worn over a tightly fitting knit shirt.

At a meeting of the Louisville Medico-Chirurgical Society, October 14, 1881, I reported a few practical modifications, such as strips of thick linen instead of the paper, and thin sheepskin applied with glue. The best method probably, considering all the conditions, is that of saddle-skirt or saddle leather, soaked in hot water and moulded to the cast, the stiffness being regulated by the degree of heat in the water. An ordinary roller is used for compression, but if there is much deformity a Martin's bandage is more serviceable. This is the sim-

plest and the most durable of all the materials I have tried.

As above mentioned, I would like to insist more strongly on the danger of suspending the patient in order to secure the shell for the cast. A year's experience convinces me that the advantages of having the patient lie on a hammock are very great. The idea that there is any extension at all is a false one, and even if an attempt be made to secure this, the apparatus will not only be unbearable, but also dangerous. The anatomical relationship of the parts utterly disproves the possibilities of extension between the pelvis and axillæ. The benefit derived is from the compression of the splint, just as rest is produced by the plastic treatment of fractures; and the more equable and perfect this compression, the better the effect; hence, rather than use the dinner or respiratory pads, I lessen the antero-posterior diameter of the trunk by the use of the hammock, and get the cast while in this position. So when the brace of whatever material is applied and laced, the body is compressed on all sides, the greatest splint action being between the abdomen and thorax anteriorly and the spinal column posteriorly.

I have never seen any difficulty arise, or complaint made, after the first day or two, from tightness of the splint. Nor have I ever noticed hernia as a result of the compression of the abdomen.

As suggested by the late Dr. Hodgen, of St. Louis, a head-spring and shoulder straps should be used whenever the disease is above the sixth or seventh dorsal; no extension being attempted, the weight of the head alone as far as possible being lifted from the diseased vertebræ.

When abscesses appear the mechanical treatment should be continued and rest in horizontal position enjoined. Confinement in this position is not as necessary in psoas abscess as it is in the other form, which may interfere with the mechanical treatment.

Should paraplegia appear, the mechanical support must be kept up unremittingly. I have seen little effect from the special treatment of this nerve lesion, and should advise nothing more than tonic treatment. Time will do the rest.

The introduction of vertical pads in the splint, so arranged that they will lie on either side of the spinal column, makes it much more accurate and comfortable. They should be thick enough only to relieve pressure over the processes. I have used this addition for a year in a number of cases, and have been much pleased with its efficacy.

The question of prognosis is one that will always come up at the first examination of a case of Pott's disease. If the surgeon is honest and wise he will never give any but a very guarded one, explaining to the parents, as far as possible, the difficulties that may arise, and the impossibility of overcoming any deformity that may exist, and in certain regions of arresting even the increase of deformity.

Dr. Oscar Allis, of Philadelphia, in a recent paper read before the Philadelphia County Medical Society, doubts whether subsequent deformity can be prevented even where firm anchylosis has occurred. He argues that in the growth of a child the sound structures will grow while the cicatricial tissues remain the same—increased deformity being the inevitable result. With this view in mind we should be very careful in raising hopes in the minds of the parents as to the final result, for no one can tell when they will be dissipated by the appearance of abscess, paralysis, or other complications that will materially affect the prognosis both as to time and result.

A question very difficult to decide is, when will it be safe to discontinue mechanical support? I do not believe one can determine positively. You must be governed by the circumstances that surround the individual case, and frequent experiments, due care being enjoined, alone will enable you to decide as to the time. In this connection it is well to call attention to the ill effects of all spinal apparatus—*i.e.*, the great muscular atrophy which necessarily ensues as the result of long confinement in a splint. When the question of removal of support therefore comes up, we cannot tell whether the weakness lies in the muscle or in the bone. The superior advantages of removable splints are very evident in this respect, for after the first six months it is not dangerous to remove the apparatus daily, or twice daily, in order to treat the muscles by massage, faradism, etc. Of course, during this procedure the patient must be in a horizontal position. When the support is removed tentatively, the child should be placed on the bed or on the floor, and carefully watched while at play, to ascertain if it will unconsciously be guarded in its movements. If no sign of tenderness is observed, then direct that the splint be loosened at night for a week, enjoining upon the mother or attendant close scrutiny regarding the child's sleep. If all go well the brace can be finally removed and a snug roller applied to the whole trunk. Should the roller be insufficient, a corset can be made over the last cast and substituted for the stiff apparatus removed.

Constitutional treatment, of course, is very important in those cases—life in the open air being the first requisite.

Louisville, Ky.

Scarlet Fever and Butcher's Meat.—There seems to be some evidence that scarlet fever may be communicated through butcher's meat. Dr. Robertson, of Penrith, England, reports the following case:

In a butcher's family there was an exceedingly mild case of scarlet fever, so mild that no medical man was called in, the disease, in fact, not being recognized; but the free desquamation of the skin, and the former history of slight fever with sore throat, leaves no doubt as to the nature of the illness. The occurrence of such a case in a small house, and where no precautions were taken, renders it an easy matter to spread the disease in the manner Dr. Robertson suggests. The number of cases in the neighborhood continued to increase, notwithstanding all the precautions that were used, in addition to the closure of the schools. The meat is the only means by which Dr. Robertson can imagine the disease was carried in several of the cases. In another village, a large number of cases of scarlet fever occurred, and the health-officer has strong reason for suspecting the butcher's meat as a medium by which the infection was spread. The circumstances here were almost identical with those of the first outbreak. The first case was at a butcher's house; it was a slight one, not recognizable by the parents at first; free desquamation took place, and the child was allowed to run all over the premises. —*Brit. Med. Jour.*

Cellulose, according to M. Duclaux, is digested in birds and ruminants and perhaps in man, not by any digestive secretions, but by certain specific bacteria-amylo-bacteria. These do their work in paunch, gizzard, and intestines.

ON THE LOCAL TREATMENT OF CARBUNCLE BY THE MOIST-SPONGE DRESSING AND COUNTER-IRRITATION.

By GEORGE McCLELLAN, M.D.,

SURGEON TO THE PHILADELPHIA HOSPITAL, LECTURER ON SURGERY, ETC., ETC.

Carbuncle is always a formidable disease. Even in successful cases the system is generally kept weak and depressed owing to the severe drain it has borne, and the protracted treatment by the ordinary methods in use. The general treatment must be adapted to the circumstances of individual cases, but for the purpose of arresting the local inflammation and removing the slough, which is characteristic of the disease, various methods have been pursued.

Heat and moisture, by softening the tissues, hastens suppuration and relieves tension and pain. The *sponge-dressing* is admirably suited for furnishing these conditions; and as I have employed it with the result of speedily removing the disorganized tissues and subduing the carbunculous inflammation in a remarkably short period of time in many very grave cases, I feel justified in calling attention to its use.

A soft sponge large enough to embrace the entire surface of a carbuncle should be applied by a bandage firm enough to exert gentle and uniform pressure directly upon the inflamed part. Small slits or openings should be cut in the bandage so as to readily admit of a warm liquid being poured into the sponge from time to time. The peculiar suction power of the sponge, which the moist state augments, rapidly removes the suppuration as it occurs. The pressure prevents undue infiltration and relieves the tension, and consequently the pain, which is often a most distressing feature of the affection. The compressibility and elasticity of sponge admits of the nicest adjustment, so that any desired degree of pressure may be exercised. This is important in cases where the carbuncle has not yet developed the characteristic slough, for very often the determination may be aborted by uniform pressure. The dressing should be removed, when suppuration is established, twice a day, and the sponge thoroughly washed out and reapplied.

At each change the sponge will be found to contain all the discharges, so that the condition of the parts can be clearly seen. Generally the slough will detach itself within a few days, and be found adherent to the sponge upon its removal, leaving a free granulating ulcer in its place.

The tendency to spread, which many carbuncles manifest at certain stages, is due to the intensity of the inflammation and the profuse infiltration into the tissues, which destroys the barrier of lymph Nature ordinarily throws out to check the progress of the disease. In order to prevent this I have been in the habit of applying a solution of nitrate of silver or iodine liniment in a circle round the carbuncle as a counter-irritant. I will instance one case out of many. An old woman, over eighty years of age, was admitted into my ward at the Philadelphia Hospital with a carbuncle the size of a saucer on the back of her neck. She was greatly enfeebled and suffering severely. The tissues were indurated, angry, and livid. There was no discharge, although the surface was cribriform, having many openings through which the slough was visible.

A zone of iodine paint was applied about the swelling, and a large, soft, moist sponge applied with a four-tailed sling. Openings were made so as to keep the sponge moist with warm carbolic lotion (1–30), and a small shot-bag adjusted so as to exert considerable pressure. Within an hour the pain was relieved, and the next day the slough was loosened, the tension being entirely removed. In a fortnight the patient was discharged cured, with a cicatrized surface, showing no perceptible loss of structure. In view of the advanced age of the patient and the extent of the carbunculous inflammation, the result was certainly remarkable.

The usual method of employing poultices to remove the slough is tedious and disagreeable (unless they are very frequently changed), and does not admit so readily of exerting pressure, which, as I have attempted to show, exercises so beneficial an effect in preventing infiltration and overcoming tension. The old-fashioned practice of making a crucial incision as a preliminary step in the treatment of carbuncle has been in great measure abandoned, except on the face or lip, as it neither hastens the cure nor lessens the suffering.

The quality of drainage which a sponge possesses comes into value in the treatment of carbuncle, as it has been found to do in all the forms of dressing to which it has been applied.

A RARE CASE OF ERYTHEMA NODOSUM.

By GEO. THOS. JACKSON, M.D.,

NEW YORK CITY.

N. A——, aged twenty-seven, came to me on the 19th of April, of this year, on account of a skin lesion which appeared that morning. He is a lawyer by profession, very ambitious, and working very hard. He is very tall and thin, of marked nervous temperament, of good habits, and usually enjoys good health. His bowels are regular, and on careful inquiry no symptom of dyspepsia was discovered, except the dry mouth in the morning so common in smokers, and slight loss of appetite. Tongue clean. Pulse and temperature normal. Owing to his duties his meals are irregular, and on account of some very sad news suddenly received during the previous week, he has of late been feeling much depressed. No history of rheumatism. He is anæmic.

On the evening of the 18th of April he felt chilly, and fearing that he had taken cold he took ten grains of quinine. On the morning of the 19th of April on rising he noticed the eruption about to be described, and in the afternoon of the same day he came to me. Upon examination I found upon the right side of the neck, in a space bounded superiorly by the lower border of the inferior maxilla, posteriorly by a line drawn from just behind the right ear to the acromial end of the right clavicle, inferiorly by the right clavicle, and anteriorly by the median line of the neck (the space corresponding to the region supplied by the superficial branches of the right cervical plexus), some half a dozen disseminated nodes, oval in shape, their long diameter from half to one inch in length, raised and tense, of a pinkish to red color, which entirely disappeared under pressure, returning immediately upon its removal. Beside these nodes there was present in the same region an erythema papulosum. The left side of the neck and the rest of the body were *perfectly free* from any cutaneous lesion.

The patient said that the eruption neither itched nor pained, but annoyed him by a certain undefined, uneasy sensation making him conscious of its pres-

ence. He complained of a slight sore throat, which examination showed to be due to a mild pharyngitis. He was given a tonic of iron and strychnia, and an alkaline wash. Regulate diet.

April 21st.—An increase of the erythema papulosum on the neck, some papules appearing in the beard. The nodes are unchanged. Bowels constipated to day. Patient complains of slight pain in right hand, and says he feels used up. Continued the tonic, and gave ungt. zinc. oxid., and a laxative mineral water.

April 23d.—Patient did not sleep well last night on account of a stinging pain in seat of eruption, and this still continues. Examination shows that the erythema papulosum has spread down the right side of sternum and over the right pectoralis major. One of the nodes has become purple. Continued treatment as before and ordered some one-grain pills of opium to be taken as required to produce sleep.

From this time on he steadily improved, the eruption fading away with slight desquamation, all trace of it being lost in about three weeks.

This case is peculiar in being located upon the neck, in the region of distribution of the cervical flexus, erythema nodosum being usually located upon the shins, and in its limitation to one side, erythema being usually symmetrical. From its close relation to the branches of the cervical plexus, I believe this case was of nervous origin.

14 East Thirty-first Street.

SCARLATINOUS ERYTHEMA FOLLOWING ADMINISTRATION OF QUININE.

By J. M. FRENCH, M.D.,
SIMSBURY, CONN.

On June 10, 1881, I was called to see an Irish servant-girl, suffering from a well-marked attack of the tertian form of malarial fever. There had been four distinct chills, on alternate days. From the last and most severe of these she was just passing into the sweating stage when I saw her. Her pulse was 100, temperature 100⅘. I gave her a solution containing about four grains of sulphate of quinine, to be taken at night and repeated in the morning. This was to be followed at noon, at night, and the next morning, by about five grains of quinamine. In all, she took about eight grains of quinia and fifteen grains of quinamine in forty-eight hours.

On June 13th, there was no return of the chill; but a diffuse, erythematous eruption had begun to show itself on her chest and arms, with some small vesicles on the arms.

On June 14th, still no signs of the chill, but the rash had become general, with numerous miliary vesicles. The itching was intense, and the temperature high. I had suspected from the first that the eruption might have been caused by the quinia, but had never seen a similar case, nor could I find any such on record. As the symptoms had become somewhat severe, and I was in doubt as to the nature of the disease, I called a neighboring physician in consultation, and he unhesitatingly pronounced it a case of scarlet fever. And it must be confessed that the appearances at the time were well calculated to favor that opinion. The rash was of a scarlet hue, the itching was intolerable, the febrile symptoms were moderately severe, and the tongue presented the typical strawberry appearance. The case was treated as one of scarlatina, and recovery took place in due time, being followed by free desquamation.

But no sooner had she recovered, than she was again attacked by severe chills, for which I gave her five grains of quinia three times a day. The chills ceased promptly, and she suffered from a second attack of the scarlatinous rash, with febrile symptoms and intense itching, as on the previous occasion. This passed through a regular course, similar in every essential respect to the first, except that it was slightly less severe.

But no sooner was she fairly convalescent a second time than the chills again made their appearance. This time a homœopathic practitioner, who lived close by, was called in, and administered a remedy in liquid form, to be taken from a tumbler in teaspoonful doses. He was evidently not a dealer in high potencies, for his medication was followed by a third appearance of the eruption. The accompanying constitutional symptoms were less marked, but the itching was still intense. She had now become very suspicious, and unwilling to take the medicines which were given her.

This time still another physician was called to see her, and he began his treatment by administering a few doses of a pill composed of aloes, blue mass, and podophyllin. The effect of these was most happy, and the patient experienced much relief. Upon his second and last visit, however, he added to this some preparation of cinchonidia, to be taken for several days. She had now learned caution from a sad and itching experience, and not liking the effect of this last remedy, she evaded taking it, in every possible way, and thus escaped its full effects. The eruption, however, promptly made its appearance, but in a slightly modified form. Upon its disappearance, there was now no return of the chill, but she suffered for some time from sores and ulcers upon her hands and arms. After several months, however, she fully regained her usual health.

The following points in the case seem to me worthy of note:

First.—There were no cases of scarlatina in the vicinity from which she could have contracted the disease. The only conceivable source of exposure was the occasion of a visit to Hartford, twenty-two days before the eruption made its appearance. Dr. Flint says the period of incubation rarely exceeds six days.

Second.—Although there were at least six persons in the house with her, some of them young, who had never had the disease, and who visited her room, some of them frequently, bathed her and combed her hair—and also several neighbors who visited her room—yet no one contracted scarlatina.

Third.—There was at no stage of the disease any affection of the throat.

Fourth.—The eruption appeared at least four times in distinct form and each time it came on directly after the use of antiperiodic remedies.

Fifth.—The connection between the two was so close as to force the conviction upon the minds of the patient and her friends, that the drug which was given to abort the chill was the cause of the rash; and of the two she much preferred the chill.

On page 152 of the current volume of The Medical Record it is stated that a scarlatinous erythema is liable to follow the use of quinia. The present case I regard as an exaggerated instance of this kind. Having been unable to find a parallel in the experience of my brother practitioners, I think the case may be worthy of record.

CASE OF CYSTIC TUMOR OF THE STOMACH.

Reported by H. H. READ, M.D.,
HALIFAX, N. S.

W. S. S ——, aged sixty-two, short, stout, and apparently in robust health, was attacked January 28, 1882, while at his office, with excruciating pain, beginning in the right hypochondriac region and radiating over the whole upper part of the abdomen.

While driving home he vomited profusely several times, and two hours later I found him showing the signs of severe agony, with great depression and deathly pallor. The attack was attributed to an oyster stew taken the evening before.

The pulse was 48, skin cold, and the vomiting continued at intervals, the vomited matter consisting of mucus and partially digested food, but no bile. The face and eyes were tinged yellow, the urine was cloudy and of a deep yellowish brown hue, and the stools had been pale for some days.

Gallstone colic was diagnosed, and the usual remedies administered, but the pain yielded only to morphia, and then to a very limited extent. Chloroform proved useless.

At this stage Dr. Dodge was invited to see the case, and continued in associated attendance till the close.

For the next day or two he seemed to improve slowly and gradually, when, early on the morning of January 31st, coffee-ground vomiting appeared.

The indicated remedies were given with small lumps of ice, and only milk and lime-water allowed, and during the next day the vomiting ceased. The existence of a grave organic lesion was now feared; but as the pain continued to be distressing, it was hoped that the hemorrhage was due to the influence of the gallstone, which had evidently failed to pass.

A fresh symptom now appeared, and continued to the end, viz., an audible gurgling in the stomach; worse after swallowing any liquid. At times this seemed to me to be like the sound produced by drops falling a little distance into a liquid.

The urine now cleared up, and the stools showed the presence of bile in large quantities. Evacuations occurred only after injections, and were carefully but unsuccessfully examined for gallstones. The eyes lost their yellowish hue, but the countenance still retained an ominous fawn-yellow tint.

The pulse gradually rose to 90, the temperature to 101°, and, as the tongue showed a dry, brownish streak down the centre, I began to hope that the development of typhoid fever would solve the problem before us.

In the course of a week, however, these indications passed away, the tongue became moist and pale, the temperature sank to 98°, and convalescence seemed imminent, when, on February 19th, a fresh attack of coffee-ground vomiting set in, and refused to be controlled. The epigastric region became tense and tender, and the seat of a constant burning pain. He rejected food of every kind, and suffered frequently from hiccough. The temperature continued at the normal point, and a diagnosis of malignant disease of the stomach was made. February 24th, Dr. Stewart, of Pictou, was called in consultation, and, after a careful examination, concurred in the opinion given. The patient grew worse without any fresh development, and died on the morning of March 2d, after an illness of nearly five weeks. The next day, with the assistance of Drs. Dodge and Lindsay, an examination of the abdominal cavity was made. The subcutaneous fat was fully an inch in thickness. No signs of peritonitis appeared. The liver was normal, and the gall bladder contained a stone of the size and shape of a chestnut, with one end slightly eroded.

The stomach appeared to be enormously dilated; and in endeavoring to remove it, it was ruptured in two or three places, and fully a quart of gray grumous fluid escaped. After tying the duodenum and œsophagus and removing the entire mass, it was found that we had really ruptured a cyst which completely enveloped the stomach, extending from the liver on the right to the spleen on the left, and was closely adherent to both. It surrounded the common bile-duct, which was dilated to the size of the little finger, descended to the lower end of the descending portion of the duodenum, and enfolded the whole of the greater curvature of the stomach, forming adhesions with everything with which it came in contact. Besides the escaped fluid, it contained numerous lumps of a fatty substance of the size of cardamom seeds, and loosely attached to its walls were masses of these fatty lumps aggregated together, with black streaks intermingled. These latter were the remains of extravasated blood. The stomach showed a punched-out ulcer the size of the thumb-nail, with the open mouth of a small blood-vessel in its edge. Around it for some distance the mucous membrane was congested and covered with bleeding points. Only a thin layer of connective tissue intervened between the bottom of the ulcer and the cyst. A careful examination of the specimen was made by Drs. Stewart and Lindsay, and I append a description of the appearances found, kindly furnished by the former.

"The cyst then, for such it appeared to be, was for the most part thin-walled. The outer surface was serous, evidently peritoneal. The inner surface was extremely rugged, giving the impression of numerous septa, torn and hanging in tags and fringes. It was of a grayish-white color and coated with a peculiar soapy stuff, of a dirty white color, but in many parts containing black particles.

"This matter examined carefully gave very negative results. It seemed to consist entirely of fat cells, and these, with scarcely any exception, contained crystals. There were oil globules, but these were all very small. A few cholesterin crystals were seen, and the black material was evidently derived from blood, showing hæmatridin crystals. The grumous fluid contents of the cyst showed the same characters.

"On cutting into the wall of the cyst where it had any thickness, we found several small infarctions, some of old standing, others quite recent, showing all stages in the changes of blood-clot. One or two of these near the bile-duct had a greenish tint.

"At the periphery of these infarctions the only characteristic cells were found. Some of these I have figured. The most were curved-spindle cells, very like those from the periphery of a cell-nest, and in one field we saw what seemed to be part of a cell-nest. Some of these cells, much shrivelled, were found in the fluid-contents of the cyst.

"Other cells were apparently epithelial also, but large, with large nuclei and very distinct nucleoli. Sometimes several nuclei were present.

"We found no indications of a dermoid character for the growth: only the universally present crystals in the fat cells seemed somewhat embryonic.

"I think it likely the growth originated as a submucous fatty tumor, gradually acquiring a malignant nature, and that the cystic character arose from repeated infarctions gradually breaking down."

AN ALLIED FORM OF PITYRIASIS RUBRA.

By HALSEY L. WOOD, A.M., M.D.,

ASSISTANT PHYSICIAN, MICHIGAN ASYLUM FOR THE INSANE.

Pityriasis rubra, as usually described, is a universal dermatitis, of sudden origin, extending from the crown of the head to the sole of the foot, from the finger-tips to the edges of the eyelids. This inflammatory condition is followed by the desquamation of the epidermis in the form of bran, of scales, or of large papery layers, over the entire surface affected. Its essential features are its occurrence in previously healthy persons, its tendency to become universal, its non-amenability to treatment, and its tendency to spontaneous cure.

The universality of the dermatitis characterizing the disease, is regarded as typical of the affection; hence, "dermatitis universalis," "general exfoliative dermatitis," etc., terms used as descriptive synonymes. Devergie says that it is the only disease of its kind that attacks the whole of the body, from head to foot, without leaving a sound spot.

The dermatitis is, however, not always universal; Devergie has seen cases in which there was a moist exudation and more swelling of the skin than in eczema; Hebra uses such expressions as "pityriasis pemphigoides," "le pityriasis rubra se transforme en pemphigus"; and Dr. Stephen MacKenzie has even seen a pityriasis rubra that was *white!*

I am therefore encouraged to present a case that appears to be allied to pityriasis rubra, but which differs from any case of such disease with which I am familiar, in deep pigmentation of the epidermis prior to exfoliation, and co-extensive with the dermatitis. Other general features were the well-marked character of the dermatitis, the absence of general constitutional disturbance, save as explained by the dermatitis; the fact that the mucous surfaces entirely escaped; the absence at all stages and in all parts of any tendency to eczematous inflammation, and the entire absence of deposit in the skin or of thickening. I append a history of the case.

L. H——, female; aged thirty-four, single; domestic; reads and writes; hereditary predisposition unascertained; third attack; first admission. Admitted August 3, 1871. Form: mania recurrent. Cause: previous attacks. Maniacal symptoms subsided by the following January, and have not since reappeared. Her mental condition has of late years been that of dementia, with its characteristic irritability; she has had frequent periods of depression. Menstruation has been normally performed, and there have been no symptoms suggesting uterine complications.

February 1st.—Complained this evening of pricking and smarting sensations in her feet, which, on examination, were found slightly reddened and swollen on their plantar surfaces; hyperæsthesia and pruritus marked. The swelling was most pronounced about toes and ball of each foot; the redness most decided upon under surface of toes and sides of heel, where epidermis was thinnest. Discoloration was generally diffused at the points mentioned, disappeared on pressure, and was associated with venous distention and œdema behind malleoli, extending above the ankle. There was no apparent constitutional disturbance.

February 4th.—Epidermis upon plantar surfaces of feet, has cracked slightly in places, and seems to be desquamating at isolated points. The feet are decidedly tumid, discoloration is now deep scarlet, and the œdema has increased. Patient suffers greatly from pain, heat, and pruritus, in the parts affected.

February 7th. — Tumefaction somewhat less; œdema disappeared; limited locomotion possible without especial discomfort.

February 10th.—Hyperæmic discoloration of neck about collar line, with slight pigmentation. Epidermis desquamating from toes and plantar surfaces of feet; tumefaction of palmar surface of hands and fingers, which are flexed with some difficulty.

February 14th.—Mottled spot of pigmentation appears on forehead. Isolated, irregularly circular hyperæmic spots appear upon upper anterior surface of thorax, apparently due to hyperæmia of vessels in papillary layer; papillæ standing out from a circle of congestion. Itching, heat of skin, with pricking and smarting sensations, increase. Anorexia has become marked, and she is ordered special diet with mild stimulation.

February 16th.—Spots upon chest have coalesced, forming a continuous hyperæmia, extending to and involving the mammæ.

February 18th.—Abdomen covered with a generally diffused hyperæmia; color upon thorax, deepened to scarlet, desquamation about fold of neck commencing. Pigmentation appears at flexure of elbows and about axillæ; posterior thoracic surface reddened slightly; pruritus somewhat less.

February 21st.—A broad ring of pigmentation has formed at waist-band, marked in front and at sides of thorax, absent posteriorly; continued exfoliation of epidermis from neck, and commencing upon chest. She suffers greatly from pain. There is some febrile distnrbance this evening; pulse, 98: temperature, 100°; respiration, 20. Urine examined with negative results.

February 24th.—Skin deep crimson upon lower part of thorax and abdomen; pigmentation covers lower part of back and gluteal muscles and lateral thoracic surfaces.

February 28th.—Exfoliation continues upon chest, large quantities of dead epidermis coming away and filling the bed with the débris. Denuded surface presents papillary congestion; pigmentation has deepened to dark brown.

March 1st.—7 A.M.: Temperature, 101⅘°; pulse, 120; respiration, 24. 7 P.M.: Temperature, 104°; pulse 140; respiration, 28. Extensive dermatitis: surface highly congested, extreme hyperæsthesia; weight of bed-clothing borne with difficulty and patient screams with pain.

March 2d.—7 A.M.: Temperature, 103°; pulse, 120; respiration, 26. 7 P.M.: Temperature, 101°; pulse, 100; respiration, 20. Pigmentation covers posterior thoracic and gluteal surfaces, and appears in popliteal spaces. Appearance of hyperæmia upon the dorsal surface of feet. Skin upon affected surfaces, where unexfoliated, deeply pigmented, wrinkled and insensitive. There is a slight acceleration of pulse at evening visit (100); there is no apparent heat of skin. A slight papular eruption has been present for several days, upon the extensor surface of forearms; to-day, it appeared over the gastrocnemii. Redness and tumefaction of feet decreasing; dead skin separating from feet in large flakes.

March 3d.—Anorexia absolnte; refuses food, and reqnires feeding.

March 4th.—Pigmentation appears upon extensor surface of thighs.

March 6th.—Anterior surface of thorax and abdomen denuded of dead skin and presents a more

healthful appearance. Extensor surface of forearms inflamed and pigmented; papules coalescing.

March 9th.—Skin desquamating upon hands in interdigital spaces; patient sits up.

March 10th.—Trunk free from dead skin; arms, hands, and feet continue the process of desquamation. General condition improved.

April 1st.—Desquamation complete. Convalescence established.

The treatment was of a supporting and mildly stimulating character; largely symptomatic and "expectant." Arsenic was not well borne, and was soon discontinued. Quinine and iron were given throughout the attack, and were apparently of benefit; it did not, however, appear that anything that was given affected the course or severity of the disease.

Progress of Medical Science.

An Insufficiently Appreciated Symptom of Pregnancy.—*Le Médecin Practicien* of April 15, 1882, contains an article by D. Delattre, borrowed from the *Gazette des Hôpitaux*, upon an important sign of incipient pregnancy. It is the almost complete disappearance of phosphates from the urine. These salts, being retained in the body, are not at first utilized for the development of the fœtus, but are deposited either in the substance of the mother's bones or, as osteophytes, on their exterior. In the later months of pregnancy the fœtal osseous system is developed largely at the expense of the reserve supply of osteoplastic material. The maternal bones then regain the former size, and the osteophytes disappear during the first months of lactation, after having assisted in maintaining the amount of phosphates in the milk, at the natural standard. If the mother be of feeble constitution, the phosphates necessary for the development of the fœtus are withdrawn from her own tissues instead of from a reserve supply, in the form of osteophytes, and her impoverished blood fails to furnish an adequate amount of phosphates to her milk. The child, therefore, becomes rachitic. This catastrophe may be averted by the administration of phosphate of lime during utero-gestation. Dr. Delattre prefers the syrup of the lactophosphate of lime, and asserts that dentition is always established much earlier in the children of mothers subjected to the above treatment. The author, moreover, believes that the emesis of pregnancy may be somewhat alleviated by the use of the same remedy.

The Seat of the Bacteria in Leprosy.—*La Presse Médicale*, January, 1882, furnishes an abstract of M. V. Cornil's researches regarding the seat of the bacteria in leprosy, attributing the same to the *Union Médicale*. The author states that the abdominal viscera examined by him were filled with the bacteria, and so disintegrated that the anatomical structure peculiar to any individual organ could no longer be recognized. The microphytes were present in various stages of development, occurring as spores, slender rods, longer rods enclosing granular matter, and as rods united by their ends into chains. The bacteria produced two kinds of lesions. One of these consisted in nodules or infiltrations composed of large cells enclosing very minute bacteria. In soft organs, such as the liver, these organisms attained a large size, and the capillary vessels were obstructed by zoogloea. In the other variety of lesion, found chiefly in fibrous tissues, the bacteria occurred in elongated forms between the fibres. The connective-tissue cells remained intact except in those cases attended by sclerosis of the tissues affected.

The Treatment of Carbuncles.—In the course of a recent clinical lecture, delivered at the Hôpital de la Charité, M. Gosselin made some interesting remarks on the above subject *à propos* of a carbuncle on the neck of a patient then presented. He advised opium and chloral for mitigation of the intense pain, and subcutaneous incisions, after the method of Alphonse Guérin, in the event of failure of these anodynes to relieve the suffering. The object of the incision is to relieve tension, to divide some of the sensitive nerves, and to afford an exit for the inflammatory products. The incisions are made hypodermically, in order to prevent the development of erysipelas, which often attacks an open cutaneous wound under these circumstances. A bistoury is usually introduced through one of the spontaneous cutaneous apertures produced by the carbuncle, and is then made to divide the inflamed tissues in a direction parallel to the surface. If there be no spontaneous opening which may be thus utilized, the bistoury is inserted through a cicatrix, and section effected, subcutaneously, as in the former instance.—*Le Médecin Practicien*, April 15, 1882.

Condition of the Eyes in Fatal Anæmia.—The *Archives of Ophthalmology* for March, 1882, contains an article by Dr. Boerne Bettman, of Cincinnati, upon the above subject. His conclusions are based upon the examination of four eyes taken from two patients dead from fatal anæmia. The morbid anatomical appearances found embraced changes in the walls of the blood-vessels, œdema of the nerve-fibre layer, hemorrhages, and varicose nerve-fibres. There was no fatty degeneration of the vascular walls, nor were the aneurismatic enlargements of the retinal capillaries such as were observed by Eichhorst and Manz. The capillaries of the choroid coat were uniformly dilated, the dilatation being most marked at the fundus. The retinal œdema was most plainly evident in the vicinity of the papilla, manifesting itself in the form of retinal cloudiness. In some instances the nerve-fibres of the papilla were also separated and œdematous. In one case all the layers of the retina were œdematous. During life the retinal cloudiness was repeatedly observed to disappear and reappear. Round and ribbon-shaped hemorrhages were found in all the eyes, especially at the posterior pole. The ecchymoses were either simple ones or they contained yellowish-white spots in their centre. These spots may originate—(1) by the accumulation of lymphoid cells in the middle of the ecchymoses, the cells being either in immediate contact with the blood or enclosed in a distinct envelope; (2) by degeneration of the clusters of lymphoid cells; (3) by the presence of large clusters of varicose nerve-fibres in the centre of the hemorrhagic foci. Dr. Bettman maintains that the hemorrhages are due to rupture of the degenerated capillary walls. Varicose nerve-fibres were observed in all the eyes. They occurred either as homogeneous thickenings of the fibres or as varicosities with globular nuclear contents. Besides the pathological changes above mentioned, there were, in three of the eyes, plainly

visible white plaques. Litten regarded these as composed of leucocytes and varicose nerve-fibres. Dr. Bettmau believes them to be composed solely of the latter.

Croup of the Conjunctiva.—Dr. H. Knapp describes two cases of croupous conjunctivitis, in the *Archives of Ophthalmology* for March, 1882. He discards the theory advocated by Drs. Bull and Noyes, that this form of conjunctivitis is merely a variety of ordinary neuro-purulent ophthalmia, regarding it as an independent affection which differs from catarrh, blenorrhœa, and trachoma by the presence of characteristic whitish membranes. It is differentiated from diphtheria of the conjunctiva by the following distinctive points: 1. In diphtheria the lids are stiff and hard, in croup supple and soft. 2. The lid in diphtheria is hot, painful, and tender; the reverse obtains in croup. 3. The diphtheritic exudation involves all the layers of the conjunctiva, the croupous exudation constituting a surface deposit only. 4. In diphtheria the membrane cannot be removed without force, and leaves the subjacent tissue pale and ragged; the croupous deposit may be more easily wiped off, leaving the surface below it dark red, bleeding, and nodular. 5. The diphtheritic lid is anæmic and lardaceous in appearance, on section, while the croupous lid is congested and softened. 6. Diphtheria produces gangrene of the conjunctiva; croup develops polypoid excrescences. 7. Diphtheria involves by extension the bulbar conjunctiva and the cornea, while croup rarely affects the cornea and spares the scleral conjunctiva. Croupous conjunctivitis begins as a simple catarrhal conjunctivitis, the membrane making its appearance after three or four days, and remaining from one week to six months. After its removal, catarrhal symptoms persist for a variable period. The causes are those of conjunctival catarrh. The prognosis is favorable, the cornea remaining intact, and no grangrene occurring. The treatment consists in the continuous application to the lids of iced compresses, day and night, and careful removal of the secretion by means of soft sponges dipped in weak solutions of chloride of sodium or chlorate of potash, so long as the inflammation is at its height. When the membranes fall off the applications may be made for an hour, morning, noon, and night, and then gradually suspended. They are followed by weak solutions of the nitrate of silver, or by the sulphate of copper stick.

Nephrolithotomy for the Relief of Anuria.—Dr. O. Thelen, of Cologne, furnishes the *Centralblatt für Chirurgie*, March 25, 1882, with the history of an interesting case of anuria, due to impaction of a renal calculus in the ureter, together with an account of the nephrelithetomy performed by Dr. Bardenheuer for the relief of the anuria. This operation was first suggested, according to Dr. Thelen, by Czerny, and first performed by H. Morris. The patient for whom the operation was undertaken by Bardenheuer had suffered from pyo-nephrosis, which had occasioned complete atrophy of the left kidney and given rise to an iliac abscess which had been artificially evacuated through a free incision. The atrophied condition of the left kidney had been demonstrated by palpation at the time when the abscess was opened. The patient was attacked by anuria and uræmic phenomena during her convalescence, after the evacuation of the iliac abscess. A catheter was introduced into the bladder, but only a little mucus and a small calculus escaped through it. Acute pains were soon felt in the right lumbar region and radiated into the bladder. The diagnosis of occlusion of the ureter by an impacted calculus having been made, Dr. Bardenheuer exposed the kidney by an incision extending vertically from the eleventh rib to the crest of the ileum. A calculus as large as a bean having been felt impacted in the ureter, the latter was incised and the stone removed. The wound in the ureter was closed with sutures and the wound was dressed antiseptically. This operation was performed on February 9, 1882, and was followed by the free escape of urine through the bandages and the disappearance of the uræmic symptoms. On February 13th the patient had a severe chill, followed by suppression of urine and a temperature of 105° F. The wound was opened, the sutures removed from the ureter and the latter divided, inasmuch as its calibre was much diminished by an œdematous condition of the mucous membrane.

The divided end was attached by a suture to the outer margin of the lumbar wound. On the following day, urine was again freely secreted. On March 12th the patient was free from fever, the urine was escaping fully through the wound and the latter presented healthy granulations.

Extirpation of Hemorrhoids by Means of the Clamp.—The theory of "crushing" as a means for the radical cure of hemorrhoids was devised by Mr. Cusack, who claimed that "any thorough and instantaneous destruction of a part is usually comparatively painless in the injury itself and its sequence," but the operation was first introduced by Mr. Henry Smith at St. George's Hospital, Dublin. The clamp, as then used, allowed so much oozing of blood that the application of the actual cautery became as much a part of the operation as the clamp itself. The results attending a long series of trials by both Smith and Allingham led them to condemn its practice. Mr. Benham has now so far perfected the clamp that his results have been most satisfactory. No cautery is required and a ligature is rarely resorted to. The instrument and the manner of using is thus described by Mr. Benham. In appearance it resembles a pair of pincers with handles four times longer than its jaws. There is a thumb-screw attachment at the end of the handles. To operate, the patient, after being etherized, should be laid on one side near the edge of the table, and as each pile is drawn out in order, beginning at the lowest, it should be suddenly seized at its base by the clamp and the thumb-screw set. That portion of the pile projecting beyond the jaws of the instrument should be snipped off, and after retaining the "fringed remnant" in the bite of the clamp for a moment or two the pressure should be gradually relaxed, care being taken to keep the instrument well up against the buttocks to avoid putting the tissue too much upon the stretch and returning too suddenly within the bowel when released. A very large hemorrhoid should be crushed in two portions. The only dressing needed is a carbolized washing of the parts and carbolized vaseline externally and internally, some form of anodyne to quiet the patient after the anæsthetic, and opium to keep the bowels closed for five or six days, when after an easy passage, rendered such, perhaps, by Glauber's salts, the patient should be allowed to get up. Active work should not be resumed for a number of days.—*Lancet*, April 15, 1882.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, June 10, 1882.

SANITARY REQUIREMENTS OF COMMON SCHOOLS.

After all that has been said upon this subject the old story requires occasional repetition. Almost every parent in the land is aware of the fact that the sanitary requirements of the schools are not what they should be, and that the health of children is jeopardized thereby. Every physician also knows too well upon what these defects in school sanitation depend, and should use his influence in the direction of remedying them as much as lies in his power. The bringing of the sanitarian and the school officer to a proper understanding of relative positions, and a practical appreciation of mutual obligations has long been needed. There is, indeed, a necessity for popularizing the principles of school hygiene—of educating the people to the necessity of demanding such alterations in school-house construction and such change in school regulations as shall be possible. The State Board of Health has certainly done good work in this direction, and the summary of its labors in Tract 43 is full of interesting data. The sanitary condition of the school-houses in the different parts of the State has been carefully studied for a period of three months. The facts obtained have for the most part been answers to some general and comprehensive questions addressed by the board to school officials throughout the State. The conclusions, based upon the results of actual inspections of a large number of school edifices, serve to confirm, in a striking manner, those made on a more limited scale in this city and Brooklyn.

While structural improvements are being made in the school-houses in many districts, and there is a recognized attention to some of the requirements of health that have been neglected in the old school-houses, the committee of the board found only about one in fifteen of the common school-houses well outfitted for protecting the health of the pupils. Even in the exceptionally good ones, there is oftener a neglect of sufficient ventilation than a suitable provision for it. It is mentioned as a general fact that ventilation in the common school-houses is insufficient, and the means for it badly designed. When good, its excellence depends chiefly upon open windows and special facilities for controlling them. Overcrowding is particularly mentioned as a prevailing fault, and even a wrong, in a majority of the school-houses which the committee, aided by Dr. D. F. Lincoln, have reported upon. In many of the schools the overcrowding was such as to actually endanger the health and life of the children; and taken in connection with defective ventilation, was a matter for the most emphatic protest.

In numerous towns, villages, and cities, as shown in the report, there was a disgusting, degrading, and harmful neglect of sanitary cleanliness in and about the school buildings, especially as regards the privies and the means for the proper separateness and convenience of the sexes in relation to these matters.

It is strongly and properly recommended that such neglect of cleanliness and decency should be interfered with and prevented by local sanitary authority.

The supply of drinking-water for the common school children was much neglected, excepting where hydrants, from the public water service, existed upon the premises. In many instances water was obtainable only from wells at considerable distances from the school-houses, and was oftentimes insufficient in quantity.

Wardrobes or rooms, with pegs or brackets upon which to suspend outer garments and wet clothing, are seldom found suitably placed, and often they are neglected altogether.

Hand-basins, wash-stands, or lavatories, are wanting in a great proportion of the common school-houses.

The experiment of omitting the old practice of school recesses between the noon hour and the opening and closing of school, was being extensively adopted, with doubtful—probably injurious—results.

The recreations needed by school children, under the name of light gymnastics or play, are confessed to be of great use to the younger classes in the common schools; but it was found that the people did not suitably appreciate such physical exercises. It was desired, therefore, that teachers and parents should more thoroughly understand the reasons for encouraging and perfecting facilities for them.

There was also found to be special reason for urging that girls shall not be deprived of the means of health which innocent and regulated gymnastics afford.

There was much neglect of, yet an increasing attention to, school-desks.

The permanent injury to the eye-sight of school children was found to be frequent, and to bear a

direct relation to the manner in which the recitation rooms were lighted. The recommendation is very properly made by the board that the arrangement of windows, the best adjustment of seats, desks, and black-boards, and the necessary regulations of study and exercise, should be secured under competent medical advice. In other words, that competent medical inspection in such matters has become a necessity.

The reception of vaccination by school children, under direction of their parents and the school officers, was found to have nowhere produced inconvenience or serious dissatisfaction. It seemed eminently desirable, and certainly practicable, to secure general compliance with the statutes relating to the vaccination of school children as now administered under advice of the State Board of Health.

It has been shown in a very practical way that, with the best intentions on the part of the school officers, the majority of the ventilators did not perform their work. The circulation of air was at best slow, and the change of fresh for foul atmosphere was proportionately insufficient. Practically, in the majority of cases, it was little better than nothing at all. All other things being equal, the rapid change of the air is of greater importance than the mere size of the room. But this is of course a self-evident proposition. In order to obtain the best ventilation at least cost, the ordinary window board is recommended, which is inserted under the lower sash, thus allowing fresh air to enter between the space of the two sashes slid upon each other.

As an addendum to this report, Dr. David F. Lincoln has contributed a suggestive series of recommendations concerning the proper sanitary arrangements of school-houses. These are of a simple and practical character, bearing mostly on improved methods of the ventilation, heating, and lighting of school rooms. Dr. Lincoln's matured knowledge upon these subjects gives great weight to his opinions, and their wide publicity through the official publications of the board will be calculated to effect many desirable reforms. Already we are informed that the recommendations have borne good fruit, and that there is a growing desire to profit by them in many school districts. The questions concerning ventilation are grouped under two headings. How much? and How?

Dr. Lincoln also makes some practical suggestions concerning light and the proper arrangement of seats. Regarding the latter, it seems to be difficult to construct a seat to serve the double purpose of a proper one for reading and writing. The shape of the Mexican saddle is suggested as a model for a proper school seat, the lower half or third of the trunk being the part which needs firm support.

Finally, in speaking of the hours allotted to study, the following sensible conclusions are arrived at. We wish they could be read by every teacher and parent in the land:

"If young children must be kept at school for four hours together, it is necessary to break the continuity of work by a long recess of twenty or thirty minutes. They should not be allowed, either, to remain in their seats during recesses, but should all be sent out to play, under the care of teachers. . . . The experience of many excellent and conscientious teachers shows that primary scholars can very rarely be kept at work—real work—more than three hours a day. If the sessions are longer, the children have to be amused, or allowed to amuse themselves."

THE FORMATION OF FIBRIN.

The explanations of the formation of fibrin have undergone many changes in the past fifteen years. The view most generally held now is that of Albert Schmidt. According to this observer, fibrin results from the union in the drawn blood of certain factors, viz.: fibrinogen, which exists in the plasma, and fibrino-plastin, which exists chiefly in the white corpuscles. The action is prolonged by a third factor, a ferment which exists in the white corpuscle.

Mrs. Ernest Hart has recently made a contribution to the subject of fibrin-formation, which is of much interest and which may compel some modification of Schmidt's theory. Mrs. Hart used Dr. Norris' method of isolating red blood-corpuscles. By it a very few of these are obtained under the slide. They are then fixed to the slide by osmic acid vapor. They can then be stained, washed, and examined at leisure. Our experimenter found that the corpuscles presented very different appearances, according to the length of time between putting the fresh blood on the slide and isolating it for examination. At first many of the corpuscles are found to have lost their color, *i. e.*, hæmoglobin, possibly through the complete withdrawal of their serum. These pale corpuscles are the alleged new corpuscles of Dr. Norris. At a later stage the pale cells become pear-shaped, then send out fine filaments. If the process be followed closely, a continued fibrillation is said to be formed, until finally an appearance resembling true fibrin is seen. The pale corpuscles seem to have broken up into granules and threads. The length of time which this occupies is not stated.

The authoress replies to several possible objections to her facts, and shows that what she describes cannot be due to current of serum. To prove that the fibrils seen are true fibrin, she examined defibrinated blood and also serum, but with no result.

The different forms seen are carefully figured, and there can hardly be a doubt as to the changes observed.

The view that the red corpuscles are so largely concerned in producing fibrin has never before had any weighty support. The present observations can only be considered suggestive and worthy of further study.

TESTING PROTECTIVE INOCULATIONS ABROAD.

At last the value of Pasteur's protective inoculations has been tested outside of France, and under other than the discoverer's own supervision. The results have not been so brilliant as were those first announced.

For some time anthrax has prevailed at Budapest. Not long ago the authorities asked Pasteur to send them some of his protective virus, with directions how to use it. Accordingly, M. Thuillier, Pasteur's assistant, was despatched with the necessary materials and instruments.

The difficult practical point in Pasteur's process lies in the fact that the anthrax bacteria must be cultivated till they have reached just the right point, and are neither too weak nor too strong. This point is generally reached by keeping the bacteria at a temperature of from 42° to 43° C. for twenty-four days. After the animals have been inoculated with this, and the effect is over, they are again inoculated with a twelve-day culture, in order to make the protection more sure. These are Pasteur's "primary" and "secondary" vaccinations.

M. Thuillier brought the necessary bacteria with him in sealed glass tubes. They were cultivated according as they were needed, at the Veterinary Institute in Budapest.

The first experiment was upon thirty sheep. These were all inoculated. One died of a catarrhal trouble. Twelve days later the remaining twenty-nine were subjected to the second vaccination. Another sheep soon died, but the cause of death was not apparent. Twelve days after this, twenty-five of the twice-vaccinated sheep and twenty-five unvaccinated sheep were taken, and all were inoculated with the full strength of the anthrax poison. The result was as follows: Of the twenty-five twice vaccinated sheep two died, but not from anthrax. Of the twenty-five unvaccinated, twenty-three died very soon of the anthrax, and one of some intercurrent trouble.

Five cows were tried in the same way. They appeared to be protected.

Fifty more sheep were experimented upon. Six of the vaccinated died. Of fifty not protected forty-five died.

Other experiments were made upon 489 sheep. A number of the vaccinated died. Twelve were made lame by the local inflammation.

Twenty cows were inoculated with the protective, and then with virulent material. They showed very little disturbance. Of six unprotected animals one died. The remainder showed only a considerable fever.

The total result of the experiments showed that under the protective methods there was a mortality among sheep of 14.53 per cent. Among the unprotected the mortality was 94 per cent. It also appeared that the "vaccinations" weakened the animal temporarily, so that, if it had any disease before (*e.g.*, distoma, strongylus, etc.), such disease would prove fatal. There is a further question as to the healthfulness of the meat and milk of the protected animals.

On the whole, M. Thuillier's work at Budapest has as yet a doubtful value. The farmer who submits his flock to vaccination must expect to lose from ten to fourteen per cent. of them. On the other hand, this to some would be the least of the evils, since in certain parts of Hungary the annual loss of sheep from anthrax is sixty per cent.

TRAINING-SCHOOLS FOR NURSES.

The Commissioner of Education has published a circular upon the inception, organization, and management of training-schools for nurses. The pamphlet will be found of much value to those who are interested in establishing such institutions. It consists of a clear and brief description of the way to go to work in undertaking to organize a training-school, with directions for its future control and management. Some statistics are also given of the present number of these schools and the regulations concerning them. From the tables given it appears that we have now seventeen of such institutions in this country. Six of these are in New York State, three being in New York City. Boston also has three, Brooklyn and Philadelphia each two. There are also training-schools in New Orleans, St. Louis, and Chicago, Washington, D. C., and Burlington, Vt. The oldest school is the Philadelphia Lying-in Charity and Nurse School, which was organized in 1836.

Of the value and superiority of trained nurses, there is but one opinion among American physicians, and that is a most favorable one. There is, to be sure, a certain proportion of these nurses who lack stability and good sense, and become inflated with the little medical knowledge they have acquired. They talk too much, and interpret the doctor's instructions by the illumination of their own special views. It is this class, made powerful by lay and religious backing, which has caused so much trouble in England. But we do not have many of them here. It is probable that the modern-trained secular nurse is best developed and best appreciated in this country. Our training-schools are well organized. Their scheme of instruction is uniformly practical, and in its later modification especially, is calculated to make sensible and skilful nurses. There is still room for more schools and a modern education of women and men in caring intelligently for the sick. In these days we may modify Cicero's famous utterance, and say that man or woman never comes so near the gods as when they tenderly and skilfully nurse the sick and suffering.

Reports of Societies.

CONNECTICUT MEDICAL SOCIETY.

Ninety-first Annual Convention.

Held at New Haven, May 24 and 25, 1882.

(Special Report for The Medical Record.)

The meeting was held in the City Hall Common Council Chamber. The alternation of meetings between Hartford and New Haven is made imperative by a by-law of the society made when the State had two capitals, and the habit of the Legislature was followed. One great disadvantage is that it prevents the acquisition by the society of a permanent meeting place, the collection of a library of reference, or a laboratory for experimental investigations, even had we the means. But the inhabitants of the beautiful city of elms, more especially the medical fraternity, would strongly oppose any change, and it would lead to lasting animosities. There is considerable jealousy between the two cities, and always has been.

The profession in New Haven have, to a great extent, been indifferent, to say the least, toward the State Society; hence the failure to pay taxes promptly or to fulfil any duties devolving upon them for the good of the society. This indifference reached its culminating point at the convention held in New Haven preceding this one. The profession could not have treated the society much more cavalierly if it had been one of long-haired reformers establishing a new ism in medicine. Hence the growth of sentiment in favor of abolishing the system and meeting in Hartford each year. But the changed attitude this year put all such plans in the background. The profession at New Haven demonstrated that they know what hospitality is about as well as any set of men living. They attended the meetings, took part in the discussions, and met the members socially at the reception and dinner. All this was in marked contrast to the chilling indifference showu when the society last met at New Haven, when it was very severely let alone. This coolness was the result of old contests and quarrels. The younger part of the profession are not affected by their influence and many of the older ones laid aside their grievances, if they were not forgotten altogether. The prosperity of the society would be unclouded, were this coolness forgotten, and it is evidently waning.

The president, Dr. Deming, called the convention to order at 3 P.M. precisely, and appointed the usual committee on credentials. The only new feature that this committee had to report was that the Fairfield County Medical Society had elected five fellows and five alternates, and two of the latter were present to fill two vacancies; they were accepted by the committee and this decision was ratified by the convention. The committee recommended to the remoter counties the plan of the Fairfield County Society. Application was made by the president of one of the county societies for leave to fill vacancies in the delegation from his county, stating that he had been authorized so to do by his society. While unobjectionable in the present instance, the plan, it seemed to the committee, might lead to abuse and it was not allowed; this action was accepted by the convention, and the list of fellows thus corrected. The committee was then discharged.

ADDRESS OF THE PRESIDENT.

The president, as directed by rule, then called attention to such matters as he judged should be considered. With a brief mention of one or two of the more prominent names among the honored dead of the year—a former president, Dr. Ira Hutchinson, Professor L. S. Wilcox, of Yale Medical School, Dr. J. C. Jackson, long treasurer of the society, and others, whose obituaries would be given at the proper time, he proceeded to review the history and progress of the society, from the time when a handful met to elect officers, and a four-page report was sent of the proceedings to the members, to the present, when our meetings are largely attended, our publications valued by us as among the best of current medical literature, and the influence of the society known and felt over the whole State and its recommendations received with respectful attention by our Legislature and oftentimes carried into effect. The inference he drew from this was that the time had come when we should assume an aggressive policy and demand some standard of education as a prerequisite for the practice of medicine and surgery in the State, probably the diploma of a regularly chartered medical school, although he would not object to our examining board. This was more for the protection of the public than for our own, and was demanded by the enlightened sentiment of the public. He urged upon the convention to use their influence to secure this at the earliest practical occasion. The evils resulting from the present condition of affairs are too patent to need mention.

WHY SHOULD THE CODE BE MAINTAINED.

The prosperity of the society was due, he said, in large measure to the fact that we had lived up to the principles of our code of ethics. The allusion was to the *principles*, not the code itself, for the former are those that would naturally guide any gentleman in his professional life But the existence of the code implies that we live up to its principles from fear of penalties and compulsion against our wills. I am restive under this imputation, and think that the time has come for the abolishment, or at least reconstruction of our code of ethics (*i.e.*, the national code), and I should prefer the former, but at least let something be done. Do not imagine that I am advocating indiscriminate consultations. Laws are made for the bad, not the good, and those desirous of evading the spirit and letter of our code do so with perfect impunity day by day, and will. Why then should the code be maintained? There is little in its favor, and much against it. I would advise that you take this subject under consideration, and through a committee pave the way for decisive action. Much more might be said; but I have mentioned the subjects that seem to me most important, in as plain a manner as possible, as no eloquence is more effective, if as much so, with a body of intellectual men such as I address, than a clear, plain statement of facts in the concisest possible manner. The usual recess was taken for the election of a committee to nominate officers, after which the usual routine order of business was followed as given on the programme.

Dr. Chamberlain read a communication from one of the delegates unable to be present, covering much the same ground as that part of the address relating to a law regulating the practice of medicine. The policy proposed, however, was more radical: that

all intending to practice medicine or surgery should be examined by a board appointed for that purpose, and if they passed they became by law members of the medical society. The fees for examination were fixed very low, and were to go into the treasury of the medical society. Anything like diversity in medical opinions and beliefs did not appear to have suggested themselves to the doctor's mind. The whole subject was referred to the Business Committee. This committee reported that the communication be laid upon the table, which was ordered. With reference to the portion of the president's address relating to a law, regulating medical practice, the committee reported that in their judgment any so comprehensive a scheme was not now expedient. We have one efficient law relating, it is true, to medical tramps only, but wait until that is firmly established upon our statute-book, before risking another point. Our recommendations to the Legislature were received respectfully of late and acted upon often, because the things asked for were for the common good, not our own protection and aggrandizement. It was when illy digested laws were advocated for our own benefit and emolument, and matters of public weal received little if any attention, that legislative scorn met these schemes, and often deservedly. However much we may think a law for proper qualifications in medical men, before they are allowed to commence the practice of medicine, will protect the people, you are met with the objection, not a bad one either, when the people want this protection they will ask for it. Of course this is fallacious, but it meets popular prejudices. Let us rather strive to monopolize the practice of medicine by better qualifications and careful preparation. The greatest evil is the ease with which half-trained youths, or those entirely lacking preliminary education, acquire diplomas from regular schools. Let us check this evil first and improve our educational methods. While honest in the main, those that have a pecuniary interest in the matter should not be the final judges of qualifications to practise medicine. The report was accepted that no action was desirable at present on a law regulating medical practice.

A resolution was offered that that part of the president's address relating to the code of ethics should be referred to a committee of three to be nominated by the convention. The resolution was passed, and Drs. E. C. Kinney, C. A. Lindsley, and G. W. Avery were appointed and confirmed. Dr. Deming was elected, but positively declined to serve.

The Committee on Honorary Degrees recommended Dr. Pliny Earle, of Northampton, Mass., superintendent of Retreat for Insane, for election, and reported favorably upon the names of Dr. J. S. Billings, United States Army, and Dr. Wm. Maxwell, of New York, for election next year, as provided by rule. The report was accepted and the committee discharged. Dr. Earle was then elected an honorary member of this society by an unanimous vote.

The report of the treasurer was received with the indorsement of the Auditing Committee. It was accepted, and Dr. Edgerton then positively declined a re-election. His resignation was received with regret, as he has been a very efficient and faithful treasurer. He took the office with a very small balance in the treasury, the least in its history, as far as I can learn, and scarcely a county that paid its taxes in full, many having a long list of arrearages, which more than doubled the labors of his office. He leaves the office with practically a working balance in the treasury, and but one county society in arrears—an unprecedented state of affairs. His business engagements, however, prohibit his retaining the office. The following is a summary of the report:

Balance on hand from old account....	$382 24
Cash received.....	562 90
Total.....	$945 14
Increased expenses over preceding year.....	77 57
Excess of receipts over expenses.....	64 73
Balance in treasury.....	446 97
Excess over balance of last year.....	64 73
Amount due from New Haven County Medical Society, on tax laid 1881...	60 90
Due from all other counties	80

There is about the same amount due from New Haven County on the tax laid in 1880. This is the only unsolved problem in the finances of the society. When the treasury came into his hands, there were several county societies with a similar history. This is the largest society in the State and covers a large territory. The Hartford County society ranks next, with twenty-six members. There has been one decided improvement in New Haven County; there are few members in arrears over two years, while at one period there were many owing taxes for four years and more.

Taking into consideration the conditions at the outset of Dr. Edgerton's term, there has been nearly as much improvement in New Haven County as in the others, as there was more to be accomplished there than elsewhere.

LUNACY COMMISSION.

The Committee on Unfinished Business reported that the only matter that came before them was the resolutions asking the society to appoint a committee, to urge the appointment of a lunacy commission upon the Governor and Legislature, and to investigate the methods of managing asylums for the insane. In their judgment the State Board of Charities, as at present constituted, was amply competent to perform all the duties and functions which would devolve upon such a commission if appointed. By request, the secretary read the law constituting the Board of State Charities, wherein it appeared that, with respect to the inspection of insane asylums and the protection of inmates and correction of abuses, it was their specified duty to secure these results, and every power and facility that could be asked or wished was given them.

Dr. Baker, of Middletown, explained the absence of Dr. Nickerson, the original mover of the resolutions, who had expected to be present to defend them, but was unavoidably detained by the illness of his wife. He spoke briefly of the importance and need of a lunacy commission for this State, and the great good it could accomplish. Dr. White, of New Haven, said that when the resolutions were first offered he had opposed them, and also when on a special committee to report to the convention, but now he had become convinced of the need of such a commission. The expense was not worth consideration, when compared to the misery to be alleviated and the good such a body could accomplish, especially in investigating the causes and prevention of insanity.

Dr. Cleaveland, of Middletown, made the principal argument in behalf of a lunacy commission. He commenced by charging upon the society a settled policy of evasion, with the hope that the subject would drop out of sight. They were introduced in 1879, and referred to a special committee of five. This committee reported that they were not sufficiently conversant with the subject to advise the society, and recommended a committee that should present a history of lunacy commissions, their aims and results at home and abroad, to the next convention. On this committee were appointed two superintendents of lunatic asylums and himself. As might be supposed, both a majority and minority report were presented, and both were printed last year, as no time was found to discuss them. That brought the matter to the present time. Three years since its introduction the subject was ready for discussion and action. The part of the resolutions relating to the management of insane hospitals, like other hospitals, he had, after careful consideration, concluded to abandon as inexpedient. The other points in the resolutions he still adhered to, but should speak only upon the necessity and value of a lunacy commission. There was need of such a commission, first, to correct the abuses of insane asylums, and to determine that those deaths reported as suicides and sudden deaths were not due to abuse of keepers or of disciplinary measures; second, to discharge old chronic incurable cases of mild forms of insanity that could better be cared for in their homes, and so make room for the reception of recent cases in the early stages while there was yet hope of cure. Such cases were now kept out because the institutions are full; hence the great increase of life pensioners upon the State. Third, to see that the insane treated in their homes received proper care and curative treatment when most likely to succeed, also to secure the same for the insane now in almshouses, and thus decrease the number of hopelessly insane. Fourth, to see why the percentage of cases of insanity had diminished so very largely. Fifth, to study the causes of insanity and its means of prevention, in the same manner as our State Board of Health investigates the causes of zymotic diseases and the means of prevention, and spreads its information, which could be obtained from no other source, before the people. We value its labors and uphold and assist it in its work by all means in our power. It has justified its right to existence. In the same way a lunacy commission would teach the people the causes and prevention of insanity; and if it did not justify expectations, it could readily be set aside.

The objections were: 1. That the State was too small for such a commission. With an insane population of 1,400 in round numbers, constantly increasing, and the other duties he had outlined he did not think they would have many idle moments. 2. Proper persons could not be found in the State for such an office and duties. With the large number of intelligent, reputable practitioners in this State, he did not think it would take long for some of them to fit themselves for the work. 3. The expense would be a serious objection. If the matters relating to the care of the insane had been managed economically heretofore, this objection would come with greater force. The objects to be accomplished would justify any reasonable expenditure, and soon the commission would justify its claims for support. He criticised the majority report of last year for omitting to state the results of lunacy commissions in this country and their history. In conclusion he based his plea on the broad ground of humanity, to secure the rights of those that cannot care for themselves, and to prevent the occurrence of the greatest scourge and most transforming plague to which humanity is heir.

Dr. Chamberlain denied that the society had pursued a settled evasive policy; the only intended delay was the reference to a special committee; and he still thought the society should never take sudden action or give decided opinions upon subjects, the general nature of which they were unfamiliar with; and when proposed they certainly knew nothing except in the vaguest way about lunacy commissioners. Last year there were five long reports made on special subjects, these coming last in the regular order of business. When read, a motion was made to defer debate until after the election of officers, laying the annual tax, etc., which must have been done then, if at all. When the necessary business was finished, it was so late no one would remain to discuss any subject. He had no serious objection to a lunacy commission; but failed to see how they could reach the insane cared for in their homes, or by what right in this country they could interfere in such cases.

Dr. Stearns, of Hartford, said on behalf of the majority report that, if they had said nothing about lunacy commissions in this country, the omission had not been supplied either last year or this. As a superintendent he had never opposed such a commission, and in fact heartily wished every State could have a commission like that in Scotland. But our free institutions would admit of no such measures, and it was simply impracticable. The expense would be a large one, as the work would take the whole time of three experts of the highest capabilities. To do the work outlined in asylums with reference to discharging chronic cases of insanity, would require a prolonged residence, and even then mistakes would often occur. The mild-mannered, gentle patient, to-day, might be a destroying demon the next, or at rare intervals. No malady was so deceptive. As to abuses, the proof was wanting that any had occurred where prompt punishment had not at once been meted out to the offender. As attendants are human, they sometimes will err, but he failed to see how this could be in any way changed by a lunacy commission.

An animated debate followed, at times somewhat excited, as the discipline of the State asylum at Middletown was referred to. Dr. Edgerton, on behalf of the Middletown physicians, and Dr. Haun, on behalf of the physicians of Middlesex County, indorsed the superintendent and his management warmly and unreservedly. Dr. Goodwin, of Thomaston, spoke in a similar spirit, and others. As the opinion of the convention was evident, the secretary moved the previous question, which was carried. The report of the committee, adverse to the resolutions indorsing the appointment of a lunacy commission, was accepted by nearly an unanimous vote—the convention plainly thinking a lunacy commission not needed nor practically useful.

A resolution, or series, was then offered that this convention reaffirm its adherence to the national code of ethics; that we entirely condemn and reprobate the action of the New York State Medical Society; that we instruct our delegates to oppose the reception of the New York delegation at the meeting of the American Medical Association at St. Paul in any shape or manner.

Dr. Chamberlain moved that the resolutions be taken up separately, and it was so voted.

Dr. Wainwright moved that the whole be laid upon the table. We were now at harmony among ourselves after considerable turmoil of one kind or another. The discussion of these resolutions would create much ill-feeling, and that which would not easily be allayed. The motion was voted without further debate.

The Committee on County Resolves reported favorably on a resolution that came from the Hartford County Society, asking that the State Society appoint censors as a permanent committee of discipline, and assign duties to the censors of the county societies. The committee recommended that the censors of the State Society should be fellows, *ex officio*, and that the secretary make the changes in the by-laws rendered necessary in carrying these resolutions into effect, and report the whole for action at the next convention.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year: *President*—Dr. William G. Brownson, New Canaan; *Vice-President*—Dr. E. B. Nye, Middletown; *Treasurer*—Dr. E. P. Swasey, New Britain; *Secretary*—C. W. Chamberlain, Hartford; *Committee on Matters of Professional Interest*—Drs. W. A. M. Wainwright, H. S. Fuller, G. F. Lewis of Bridgeport; *Delegates to the New York State Society*—Professors F. E. Beckwith, C. A. Lindsley. After the transaction of the usual routine business, including laying the annual tax of two dollars upon each member and voting to publish seven hundred copies of the proceedings, the convention adjourned.

EVENING RECEPTION.

A very pleasant reception was given in the evening, by Professor Carmalt, to introduce Professor Beckwith to the society; the presence of ladies gave added pleasure and zest to the occasion; Mrs. Carmalt and Mrs. Beckwith, with their reinforcements, were quite the centres of attraction and decidedly carried off the honors of the evening. Several of the guests were accompanied by their wives. Professor Lindsley and his wife, of New Haven, and Dr. Avery and wife, of Hartford, and several other ladies from New Haven were also present. The affair was throughout a success. Professor Carmalt has recently had his house built and this was something in the nature of a house-warming. The rooms are finished in native woods, oiled overhead also. The floors of hard wood. In addition to the members of our own society, Dr. Sanborn, of Maine, and Drs. Browning and Hersey, of Rhode Island, were present and joined the festivities.

The convention was called together at half past nine.

The Secretary read his report. The following is a summary: The same even prosperity has characterized the past year as has been experienced of late. The death-rate continues high; we lose this year eleven by death, one more than the average for the last seven years. The average age shows that our comparative rank in longevity tables is high. While it is invidious, perhaps, to singularize, yet I may perhaps be pardoned for paying a small tribute to the memory of Dr. Lewis Williams, of Pomfret, known and loved over a widespread area around his dwelling. No noble enterprise appealed to him in vain; a large hearted philanthrophic man, he seemed to delight to do good. If the enterprise was for the benefit of humanity, he bid it God-speed and aided it by all means in his power. In him the society loses a warm friend and generous supporter.

Dr. Deming presented the annual address, as president, upon

SOME POINTS IN THE TREATMENT OF PHTHISIS PULMONALIS.

The treatment and pathology were largely of the modern French school. Tubercle was stated to be a structure, the natural tendency of which was toward recovery. After forty-five years it is a matter of unconcern whether it is developed or not. It is a disease engendered mainly from fifteen to thirty years of age. The principal topic discussed was the fever of phthisis. After deprecating routine treatment and advocating symptoms should be treated, he divided the fever into three stages: First, of invasion; second, of softening; third, of resorption. In the treatment of the first, quinine was the principal remedy, and the bromo-hydrate advised; the special excellence of this over quinine and bromide of potash, given separately, was not mentioned. For profuse expectoration, creasote, in increasing doses, was mentioned. In the discussion of the paper, petroleum was advocated as preferable, as it could better be given in pill form, and not so objectionable. The solid mass that forms inside the pipes whence crude petroleum flows, or inside tanks, was also mentioned. The essayist, however, preferred creasote, as it could be given with the cod-liver oil, and a little oil of peppermint or other essential oil would disguise taste and odor. The fever of resorption is best treated by antiseptic salicylic acid in doses of thirty grains the first day, fifteen to twenty the next two days, unless the fever subsides; if the treatment be unsuccessful, wait two or three days and repeat. The third course should not be exceeded, as cerebral trouble would be likely to ensue if the stomach did not rebel. If digestion be weak, the salicylate of soda may be used. Where cod-liver oil cannot be taken, glycerine, in doses of one and one-half to two and one-half ounces, could be substituted; in larger doses it caused disturbance. Cod-liver oil and arsenic, as general remedies, were discussed. Cod-liver oil is usually given in too small doses; those are most benefitted that can take the most. He had not much confidence in the superiority of emulsions. In concluding he thanked the society for the honor it had done him in selecting him for the presidency and for their overlooking his shortcomings in office.

Dr. W. G. Brownson, the president-elect, then took the chair.

THE TREATMENT OF PHTHISIS.

Dr. Wile discussed the paper at some length, stating that he had been surprised at the omission of the emulsion of cod-liver oil with the hypophosphites, which was so much used, and of the solution of cod-liver oil in ether, and of the value of cream in large doses where cod-liver oil could not be borne. He had found that the inability to take cod-liver oil was one of the greatest drawbacks to its use; those that needed it most could not take it; especially was this true in cases of scrofulous subjects; malt and the malt extracts had their advocates. Fothergill speaks favorably of maltine.

Dr. Chamberlain spoke of the results of the researches of Fox, of England, among the statistics of consumption. He found heredity in 25 per cent., in the rest it was enkindled with no taint in the blood

as far back as could be ascertained. On some future occasion he hoped to present this view and the evidence upon which it was based. There are two chief factors in developing consumption, bad air, especially, that which has passed two or three times through our own or some one else's lungs, and subsoil or ground water as shown by Bowditch, Buchanan, in England, and others. The theory and researches of Koch bear out and sustain this view; if phthisis be caused by bacteride, the bacillus tuberculæ, what more natural than the consumptive to send them forth with his breath, and thus poison the air. The microscope shows us what a multitude of dangers, unseen and invisible to the unaided eye, we walk amid and are encompassed with, yet obedience to the divine laws of health enable us to walk securely, for the germ must find an appropriate soil in weakened or deteriorated tissue, in order to grow, increase, and multiply; not many of these can cause healthy, vigorous tissues, redundant with life and vigor, to succumb and become the home and hostile camp for the marauding bands, devitalizing that adjacent, even if its influence reaches out no farther. Here, too, in this uneven battle, nature triumphs and expels the invader and all its germs by vigorous onslaught. The weakened lung-tissue, by oft-repeated congestion, from impure air and irritating gases, is not proof against the invasion, and yields at once; some of these cases of galloping phthisis very well merit their name.

MALARIA IN CONNECTICUT.

Dr. Wainwright, as chairman of committee on matters of professional interest, then made his report. He referred to the prevalence of malaria over wide-spread areas of the State, its persistency remaining now over twenty years in some portions, and year by year extending its territory. Also the curious way in which it took leaps into new fields, leaving the intervening belt to be covered by the gradual spread in the more usual way. Thus it had alighted in the centre of Windham County, and in its northeastern corner. A question of grave importance indeed was it whether we could or not hope for complete deliverance. Its influence on consumption is not certain, some report a great increase, others none at all. In the non-malarial towns what few were left (for the Thames is no longer the eastern bound of malaria), there was reported a decided decrease, not in all, but generally in those reported—many send no reports. He hoped the county societies would select active, earnest workers, who would secure and report the myriad interesting cases now lost hopelessly. Small-pox and vaccination were ventilated, and animal or bovine virus generally preferred. Some statistics were given which were very interesting and instructive. The view that two successful vaccinations protect, one in infancy, one after puberty. Several very interesting cases were read, and Dr. M. White described a dentigerous cyst having twenty-five unattached teeth with some flocculent matter like hair; had he thought the cases were to be related, he would have brought the specimens.

HYPOSULPHITE OF SODA IN SMALL-POX.

Dr. Chamberlain, by request of Dr. Tremaine, of Hartford, spoke of the value of the hyposulphite of soda in the treatment of small-pox, giving to children doses five or six grains every three or four hours, and to adults fifteen to twenty grains three times a day. It caused no nausea, checked suppuration, and prevented odor, absorbing the disease very rapidly. All that have used it exalt it highly, and the doctor himself is a good judge, having had more cases of small-pox than any other doctor in this country, certainly. In no cases has he known or heard of a failure; its influence on the disease is rapid and decided. He then called the attention of the convention to the joint investigation on the causes of malaria, especially the germ theory of Klebs and Brudelli and allied lines of work repeating the experiments of Dr. Sternberg, and striking out boldly in any direction, evidence gathered warrants. The theory of Saveran of its causation by pigmentary particles in the blood would also be tested. This was to be done by the National Board of Health, who furnished expert microscopists and biologists, and the State Boards of Health of New York, Massachusetts, and Connecticut. On behalf of his own Board he asked co-operation in this work, prompt replies to questions, and aid in securing material for culture, experiments, and such material as might be needed for the work.

Our own Board of Health had also planned an investigation upon school hygiene with especial reference to obtaining facts with reference to any deleterious influences exerted upon the health of school children from the primary scholar to the high school graduate. Facts were wanted; we could reach easily any quantity of theory. A list of questions would soon be sent, and a note-book for the vest pocket, and we wish the physicians, as they go among their families during the year, to note any instance they can learn from their own observation, questioning the parents, and teachers, and guardians. The social life, if any, and the collateral influences should be taken into account carefully. These note-books will be sent to all that will use them.

IMPURE ICE.

Dr. White spoke of the influence of water-supply of cities and towns upon malaria; what connection there was, if any, he did not know, but the appearance of malaria was often synchronous with the change from well water to that from brooks, rivers, and ponds. The relation of impure ice to disease was also urged upon the attention of the State Board of Health. The carelessness in gathering ice was wonderful in its recklessness, even if used for markets and refrigerators; sewage ice was unsafe. The fallacy that water purifies itself by freezing has been exploded some time ago. Much could be learned by the physicians on this and other subjects, by using their microscopes themselves, since the invention of late of oil and balsam immersion lenses, homogenous immersion lenses, as they are called, the higher powers, such as a tenth could be used by any one almost, and that was enough for all practical purposes.

Dr. Chamberlain accepted the suggestions of Dr. White with thanks, stating that an investigation of the water-supply of cities and towns had already been determined upon by the Board: the relation to malaria could readily be added. The evil effects of impure ice had been repeatedly reported, but no general investigation had ever been made. He would invite physicians to carefully note any cases of illness due to impure ice, or supposed to be so caused, and report to him. If specimens of the ice, carefully melted so as not to be exposed to too much heat, and all dust excluded during melting, are sent they will be carefully analysed free of expense, and the result reported. Send all the sediment, if there be any, but do not add any foreign substance whatever.

The President then introduced

Dr. Sanborn, of Portland, Maine, who, in a brief speech, presented the congratulations and kind wishes of the Maine Medical Society, and hoped the interchange of delegates would be kept up regularly. He promised all that came a hearty welcome. Their society numbered over three hundred, and was very active. In conclusion, he said if we were short of a supply of pure ice Maine could supply us in unlimited quantities. On being asked if there were any malaria in Maine, he said never, the average climate was too cold for its development.

The President then introduced

Dr. Wm. Browning, of Providence, R. I., who presented the greetings of the medical society of his State. He said he was glad of the privilege of revisiting his native State and New Haven, which seemed like a second home to him, as he had graduated from Yale College and from Yale Medical School also, and revisited them now for the first time in thirteen years. In regard to the relation of ponds to malaria, which had been alluded to, he would state that during the past year there had been over a hundred cases of malarial fever in North Providence and Elmwood, near what was called Mashapang Pond, and the health authorities had taken the pond in charge with full powers to do whatever was needed. This is the first appearance of malaria in Rhode Island.

The absence of Dr. Dickerson, the dissertator from sickness in his family, made the omission of the dissertation necessary.

Dr. G. L. Porter, of Bridgeport, read a very elegant and scholarly essay on

THE RECOGNITION OF DEATH.

The unreasonable fear of being buried alive which haunts some people, especially women and children, was shown to be a baseless terror; but the physician should be able to reassure his clients by proving to them that he can tell without fail whether or no life is extinct. Suspended animation in its various forms and types, sleep and hibernation, fainting and trance were all mentioned. The various tests for death were mentioned—some sixteen in number. The habit of immediately embalming or of putting a body upon ice until death was certain was deprecated as hazardous. The foolish prejudice to post mortems may have caused a burial before life was extinct. The failure of our present methods of examining the dead in cases of suspected foul play was very strongly presented. The law drafted by the State Board of Health after the model of the Massachusetts law, creating medical and legal examiners, was heartily endorsed, and the society urged to use all their influence to have the law passed by our Legislature.

A TEST OF DEATH.

Dr. B. S. Thompson, of Salisbury, presented another test of death, from the appearance of a black spot on the sclerotic outer corner of the eye. This was, at first, very small, but gradually grew larger, moving down toward the lower border of the cornea, outer angle of the eye, where it finally remained attached to the cornea, the convexity downward. It was also an indication of the time since death ensued until it becomes fixed, then it grows larger.

Dr. Hubbard moved that a committee of five be appointed by the Chair to bring this matter properly before the Legislature, with the endorsement of this society. This was carried unanimously. The President appointed on this committee Dr. S. G. Hubbard, New Haven; Prof. Moses White; Dr. G. L. Porter, Bridgeport; Dr. D. A. Cleaveland, Middletown; Dr. C. W. Chamberlain, Hartford.

A PROTEST AGAINST THE NEW YORK CODE.

Dr. Beach, of Litchfield, then read his essay, "A Protest against the Action of the New York Medical Society with regard to Consultations." It was very strongly written, and abounded in invective against irregular practitioners, especially the homœopaths. The two could not mingle any more than oil and water. A consultation was impossible, unless one or both surrendered their principles. As we could not do this, he failed to see how anything like a real consultation could be had. He wanted the masses to hear the truth. He opposed conference with "the givers of infinitesimal doses." If true that the homœopathic practice does not differ much from the "regular" practice, it does not help the homœopathists. He read extracts from homœopathic publications, which threw down the gauntlet boldly. He then expressed contempt for the man who disbelieved in homœopathy, who practises it because the neighborhood he is in demands it. He denounced homœopathy as a delusion without a scientific basis, and spoke of the wide chasm impassable between the two schools. He found no half way, and thought that the consultation of regular practitioner with a homœopathist was in the nature of compounding a social felony. To consult with homœopathic practitioner could do no good. He wanted homœopathy denounced at all times and all seasons as worthless.

The essay was vigorously and well read, the doctor's experience in the Legislature last winter improving his manner. In deference to the sentiments expressed the day before, there was no discussion. Some doubts have been expressed concerning the publication of the paper this year. Such essays do no good. They create a bad impression on the public mind, which sees only illiberality and bigotry in them, and only embitter relations which might as well be pleasant. Sentiment in different parts differs widely. There is a liberal school, so-called, which is gaining strength, slowly, it is true. Their principle of consultation and professional relationship is as nearly as it can be formulated. "Honesty of purpose to use every legitimate means for the recovery of the sick, and a thorough medical education and training in all the branches related to the healing art."

Professor Lindsley then read a defence of the following proposition:

IT IS DEMORALIZING TO THE MEDICAL PROFESSION AND DETRIMENTAL TO THE PUBLIC WELFARE TO PRESCRIBE PROPRIETARY MEDICINE FOR THE SICK.

He defined such remedies to be "any medicines respecting which some person or persons possess an ownership either of the method of preparation or of some element in their composition which is secret, or of some exclusive right to the manufacture or sale, by which the medical profession is kept in ignorance of their full qualities or deprived of such free and unrestricted use of them as would be enjoyed from fair and honorable competition in their production. They are demoralizing: First, because they render knowledge of combining remedies needless, and it is neglected in consequence; it has the same influence upon scientific pharmacy. Second, by lessening the difference between the scientific physician and the quack, and rendering counter prescribing easier; it is a good way to keep away patients who can quickly learn to fumble over samples, and

as the diseases they will cure are printed on the bottles, the symptoms on the wrappers, they can soon learn to fit their symptoms to the remedies as skilfully as the doctors. Thus it encourages the habit of the people of indiscriminate drugging themselves for real or fancied ailments. Third, it diminishes our reputation as scientific practitioners, and justly, for what science is there in prescribing a complicated and intricate remedy by some catch-word, when your only knowledge is the partial account of the composition of the remedy obligingly addressed "To the medical profession only." It encourages fraud: the complicated formula renders analysis slow and expensive, and the frequent changes, ostensibly for improvement, are excuses for different results in analysis. Fourth, it encourages credulity: we swallow these fanciful titles, which are fatal to all scientific nomenclature, such as "Iodo-Bromide of Calcium Compound," "Bromidid," "Petroleum Syrup," etc.—and their name is legion—with the same credulity and blind faith as the public Hop Bitters and St. Jacob's Oil. We are told in flaming circulars, in all the colors of the rainbow, addressed "To the profession only," that they will cure such and such diseases, are indeed specifics, and if we use them it is because we believe implicitly what we are told. He gave an amusing instance where a prescription of a popular New York physician was put up and sold as Dr. So-and-So's tincture, until gallons were sold; every drug store in a certain city sold it and kept it in bulk, obtaining it from a wholesale druggist in New York. Yet not a physician or druggist knew anything of its composition, except what was indicated by the label.

A very spirited and somewhat humorous debate followed this essay, which was quite long and went into the subject exhaustively. I have given some of the more salient points. Dr. Avery related a case where a lady, taught to use McMunn's elixir of opium by her physician, one afternoon gave to her servant girl, for some trifling but painful ailment, twenty drops of the elixir; at tea-time finding her still in pain she gave her forty drops, and at bedtime, as she was still unrelieved, sixty drops. In the morning the servant girl did not appear, and her mistress going to wake her found her dead in her bed.

Dr. Hill, of Stepney, said that, if the profession used them, their teachers showed the way and first indorsed them, and, picking up a medical journal which had been distributed by the publishers, he read thirteen names, indorsing "Bromidid," all of them professors in some medical college and one or two also editors of medical journals. Professor Lindsley challenged him to find the name of a single professor of Yale Medical School; he replied that he knew of none, but others did in abundance. Professor Lindsley said that he taught him better when he was at Yale.

Dr Wile spoke in favor of retaining known remedies of simple formula, and not condemning them simply because they were characterized by a trade mark, such, for instance, as Maltine and the like, which could not be made by ordinary druggists. Even Churchill's syrup of the hypophosphites, which Dr. Lindsley had selected as an example of a remedy of no value, palmed off on the profession by imposing upon their credulity by flaming indorsements, had its advocates and friends. While in the main he agreed with Professor Lindsley, he thought these remedies should not be indiscriminately condemned; but that such as are retained should be retained intelligently, with a knowledge of their exact nature and composition, their therapeutic virtues.

On motion of Dr. Chamberlain, the remaining papers were read by title and referred to the Publication Committee, together with all papers from county societies. The following, recommended by the committee, were elected essayists for the next convention: Dr. Geo. L. Pownall, Hartford; Dr. F. N. Braman, New London; Dr. C. H. Bill, Bridgeport; Dr. W. H. Holmes, Waterbury; Dr. J. J. Newcomb, Litchfield; Dr. B. S. Thompson, Salisbury; Dr. J. B. Olmstead, Middletown.

The convention then adjourned for the annual dinner at Redcliff's. The dinner was served at half-past one promptly, and left the members in a very happy frame of mind to enjoy the after-dinner addresses, which were very entertaining and of an unusually high order, President Porter, of Yale, Professor E. J. Phelps, of the Law School, and Professor Baldwin, also Professor Brewer, of the Scientific School, who, always an excellent speaker, excelled himself on this occasion—if that were possible. Professor Weir, of the Art School, Professors Silliman and Carmalt, of the Medical School, and Mr. George A. Butler, a New Haven banker, each in turn made appropriate speeches. Drs. G. A. Hersey and W. Browning, delegates from Rhode Island, did excellent justice to the selection of their society's representatives. Those that were obliged to leave by the early train lost a treat not easily made good. Upon the whole, this meeting was one of the most successful ever held and thoroughly enjoyable throughout from first to last.

Torsion of Arteries.—At Guy's Hospital all the surgeons use torsion to the exclusion of the ligature, except sometimes in very small vessels, wherein it is difficult to isolate the vessel from muscular fibres. They give a very large statistical showing in its favor. I have seen every kind of amputation there, except of the hip-joint, and never a ligature applied to a large vessel. They use no transverse forceps, but seizing the cut end of the vessel with strong forceps, twist it until it is felt to "give way"—that is, the two inner coats break. I have often seen six and sometimes ten complete turns given to the femoral artery. Mr. Bryant said: "Doctor, theoretically the twisted end ought to slough off, but *practically it never does*. We have to talk to our students about secondary hemorrhage, but we do not show it to them." Mr. Lucas told me that for a long time they have ceased to dread or look for secondary hemorrhage.—*Lon. Cor. Boston Med. and Surg. Jour.*

Medicine in Texas.—The Texas Medical Association held its annual meeting April 20th, at Fort Worth. Commenting on the need of active work, the *Texas Medical and Surgical Record* says: "If we wish to elevate the profession of medicine in Texas, from the very humble position which it occupies today, we must *all* work for that end. It is a public secret that, out of the three thousand physicians in Texas, not one-third is entitled to professional recognition out of their little, humble spheres. The majority are unknown; neither do they know the things they ought to know."

A female opium-eater in London (says Dr. Williams), had but four "passages from the bowels" in one year.—*American Medical Bi-Weekly*. We are glad she lives in London.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 28, 1882, to June 3, 1882.

McKee, J. C., Major and Surgeon. The extension of leave of absence on Surgeon's certificate of disability granted him in S. O. 262, A. G. O., November 10, 1881, still further extended six months on Surgeon's certificate of disability. S. O. 122, A. G. O., May 26, 1882.

Waters, Wm. E., Major and Surgeon. Granted leave of absence for four months. S. O. 121, A. G. O., May 25, 1882.

Brown, J. M., Major and Surgeon. Having reported at these headquarters, is assigned to duty at Newport Barracks, Kentucky. S. O. 57, Department of the South, May 29, 1882.

Brooks, John, Captain and Asst. Surgeon. To be relieved from duty in Department of the South when Major Brown shall have reported for duty therein, and to proceed on July 1, 1882, to Presidio of San Francisco, Cal., and report in person to the Commanding General, Mil. Div. of the Pacific, for assignment to duty in Department of California. S. O. 121, C. S., A. G. O.

Caldwell, D. G., Capt. and Asst. Surgeon. Upon completion of packing and turning over the medical supplies at Fort Sanders, to report to the Commanding officer Fort Fred. Steele, Wyo., for duty as Post Surgeon. S. O. 56, Department of the Platte, May 29, 1882.

O'Reilly, R. M., Captain and Asst. Surgeon. Now at Washington, D. C., to report in person to the attending surgeon at this station for assignment to temporary duty in his office. S. O. 124, A. G. O., May 29, 1882.

Brown, Paul R., Capt. and Asst. Surgeon. Granted leave of absence for six months on Surgeon's certificate of disability. S. O. 121, C. S., A. G. O.

Semig, B. G., Capt. and Asst. Surgeon. Granted leave of absence for one year on Surgeon's certificate of disability. S. O. 121, C. S., A. G. O.

Taylor, M. E., Capt. and Asst. Surgeon. Now awaiting orders at St. Louis, Mo., to report in person to the Superintendent Mounted Recruiting Service, for temporary duty at the Cavalry Depot, Jefferson Barracks, Mo. S. O. 126, A. G. O., June 1, 1882.

Tesson, L. S., Captain and Asst. Surgeon. Relieved from duty at the Cavalry Depot, Jeffersen Barracks, Mo., and proceed on July 1, 1882, to San Antonio, Texas, and report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 126, C. S., A. G. O.

Davis, Wm. B., Capt. and Asst. Surgeon. Having reported at these headquarters, will proceed to Fort Totten, D. T., and report to the commanding officer of that part for duty. S. O. 86, Department of Dakota, May 24, 1882.

Carter, E. C., 1st Lieut. and Asst. Surgeon. Having reported at these headquarters, is assigned to duty at Camp Price, A. T. S. O. 78, Department of Arizona, May 24, 1882.

Raymond, H. I., 1st Lieut. and Asst. Surgeon. Having reported in compliance with S. O 103, C. S., A. G. O., is assigned to duty at Whipple Barracks, A. T. S. O. 77, Department of Arizona, May 22, 1882.

Medical Items and News.

Contagious Diseases — Weekly Statement. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 3, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro spinal Meningitis.	Measles.	Diphtheria	Small-pox.	Yellow Fever.
May 27, 1882.	6	6	131	4	191	73	14	0
June 3, 1882.	5	6	114	7	126	52	6	0

Migratory Doctors.—Dr. R. A. P., of New London, writes: "In your issue of April 14th is found a wail from the far East, in the letter of 'P. A. R,' to the effect that 'it is a too frequent cause of complaint in the East, that medical missionaries and naval surgeons encroach on the domain of the local medical men, wherever they may be stationed for the time being,' etc. 'P. A. R.' has my deepest sympathy. He is not alone in affliction. Fortunate it is that we have no medical missionaries. That we are spared; but salaried officers of the Government are moved by much the same impulses apparently here in New England as in China. Surgeons in the Government service, who have been stationed temporarily here, have displayed signs conspicuously on the outside of their residences—the logical deduction, strengthened by facts, being that patients and resulting fees would be acceptable.

"As the struggle for existence is sufficiently desperate among resident physicians, of whom there is no dearth, it seems peculiarly exasperating to have physicians, whose position and maintenance are fully assured by a competent salary, reduce the income of those who are dependent on their practice for a decent living. Army and navy surgeons receive pay (adequately, I suppose) for performing certain duties, and it seems no more than just that they should confine themselves to the performance of those duties, so far as the practice of medicine is concerned. It is not fair, however viewed, for these physicians with assured incomes to enter into competition with local practitioners, who are dependent entirely on their professional income for their living. In a place like this the field does not lack an entire sufficiency of physicians, who, however hard they may work, can only expect a modest return for their labor. Professional etiquette, if nothing else, ought to deter temporary Government surgeons from cutting into the practice of us, who cannot look complacently on while the vivisection is being done. Physicians are not so few but that they can attend to all the practice offered them without it being necessary to call in help from outside.

"Apropos of this subject, allow me to notice another 'thorn.' When summer visitors come to town and seashore, we provincial doctors entertain lively hopes of being benefited by the influx, in case they are so unfortunate as to need a physician. But, no! Such an hegira of metropolitan physicians occurs simultaneously with the departure of those who can afford the luxury of three months by the seaside that we stand aghast at the multitude, and

groan in spirit over the departing vision of a possible increase in business, and profit thereby. If a physician can afford to leave his practice in the city during the summer months, he might with propriety refuse to practice in seashore towns, where there are intelligent and educated physicians within easy call. As the case stands, the city physicians rarely fail to grasp every opportunity that presents."

A Pharmaceutical Exhibition.—An exhibition, on a large scale, of pharmaceutical preparations, both organic and inorganic, of laboratory appliances, and of works relating to pharmacy, will be opened in Madrid on November 21, 1882. The exhibition will be under the immediate auspices of the College of Pharmacy of Madrid, and will be presided over by Don Fernandez Izquierdo, to whom all communications should be addressed.

Effects of Excision of Syphilitic Chancre.—M. Mauriac reports (*Gazette des Hôpitaux*, 1881, No. 7, 10, 14) seven carefully recorded cases in which he excised the initial lesion of syphilis. In six, excision was performed at periods varying from four to sixteen or eighteen days of the appearance of the sore. In the seventh case, the initial lesion was excised about fifty hours after it had been first noticed, and before there was the least trace of glandular enlargement, but in this, as well as in all the others, the operation was unsuccessful in preventing further development of the disease.—*London Med. Jour.*

Capacities of Lungs.—Dr. Nagorsky, having measured the capacities of lungs of 630 boys and 314 girls in the schools of the district of St. Petersburg, now publishes the results of his investigations in a Russian medical paper, the *Surgeon*. He has found that the capacity of lungs in relation to the weight of the body is 65 cubic centimetres for each kilogramme of weight in boys, and 57 cubic centimetres for girls. The law of Quetelet being that, with children below fifteen years of age, the weight of the body is proportionate to the square of the height. Dr. Nagorsky has found that it is proportional to 2.15 of the same; while the capacity of lungs is proportional to 2 4 of the height for boys, and Dr. Nagorsky's researches will soon be published as a separate work. As to the relation between the weight of man and the capacity of lungs, it is tolerably permanent, and its variations are mostly due to the differences in the amount of fat in the bodies of different men.—*Gaillard's Journal.*

The New York Neurological Society.—We are informed by the secretary that our item concerning the May meeting of this society was not strictly correct. A protest against the methods by which Dr. Spitzka's election had been secured, signed by thirty-five members, was put upon the minutes by a vote of twenty-two, none voting in the negative.

Typhus Fever in the City.—Five cases of typhus were found in East Forty-seventh Street recently by one of the sanitary inspectors. The source of the contagion was found to be in Nos. 335 and 337 East Forty-seventh Street, where a month ago there were sixteen cases, two of which proved fatal.

Enlargement of the German Hospital.—A new wing has recently been built to the German Hospital at a cost of $70,000. It is intended for the accommodation of women. The money was donated by Mrs. Anna Ottendorfer. The formal opening took place on May 27th, when an appropriate address was delivered by Dr. Jacobi."

Chicago Medical College.—The following appointments have been made: Dr. J. N. Danforth, to chair of Clinical Medicine; Dr. E. C. Dudley, Gynecology; Dr. Walter Hay, Materia Medica; Dr. Oscar C. DeWolf, State Medicine and Hygiene; Dr. Christian Fenger, Pathology and Surgical Diseases of Genito-Urinary Organs; Dr. F. C. Schaeffer, Anatomy.

The Wounds of Lord Frederick Cavendish and Mr. Burke.—The London medical journals have devoted their editorial columns to describing, with repulsive minuteness, the wounds of Lord Cavendish and Mr. Burke. The former received three stab-wounds, the latter nine. There is nothing in their detailed description which is of scientific interest or value. Their full publication in medical journals has very much the character of inviting all the doctors to see the corpse. To us it seems in had taste, though it may be, journalistically, enterprising.

Psychrophos: a New Cold-Light Illuminating Apparatus.—Dr. J. Michael, of Hamburg, has invented a form of illuminating apparatus. It is based on the fact that phosphorescent substances when placed in vacuum develop, under the influence of the induction current, a light which is comparatively bright, and contains but little heat.

The physician sees man in all his weakness; the lawyer sees him in all his wickedness; the theologian in all his littleness.—*Schopenhauer.*

Synonym for Gonorrhœa.—The *Parisian* delicately refers to a specific urethritis as a "'Coup de pied de Vénus'—Mal d'aventure—Pisser des lames (blades) de rasoir, des polyèdres étoilés—Couler des jours heureux!"

Consoling.—So long as man has to die, but wants to live, the physician will be abused—but employed. —*La Bruyère.*

Excision of the Pylorus by an English Surgeon.—Mr. T. A. Southam, of Manchester, England, recently removed the pylorus along with nearly a third of the stomach, from a man aged forty-three, suffering from carcinoma of the parts which were taken away by operation. A hard and freely movable mass could be felt through the abdominal walls; and operations were determined upon. The operation was performed antiseptically, after the method adopted by Professor Billroth. Thirty-nine silk ligatures were found necessary for uniting the duodenum to the stomach. The shock succeeding the operation, which lasted one hour and a half, appeared to be very slight, and for twelve hours the patient appeared to be doing well. He then died very suddenly; as Mr. Southam thinks, from the acute septicæmia described by Dr. Sims.

The American Surgical Association held its third annual session at the Hall of the College of Physicians, Philadelphia, May 31st, and June 1st and 2d. About twenty members were present from different parts of the country, besides a large number of prominent Philadelphia surgeons.

The following was the order of exercises:

First Day.—Address of welcome by the president, Professor S. D. Gross, M.D.

Election of Fellows—Drs. Willard Parker and J. Marion Sims, of New York, were elected honorary Fellows. Forty new Fellows were elected, 10 being

from Philadelphia, 7 from New York, and 5 from Boston; the rest from different parts of the country.

Paper by Professor J. L. Cabell, on "Sanitary Conditions in Relation to the Treatment of Surgical Operations and Injuries." Reception by Professor D. Hayes Agnew.

Second Day.—Paper by Professor Moses Gunn, of Chicago, on "Fractures of the Skull;" paper by Dr. Richard J. Levis, of Philadelphia, on the "Treatment of Transverse Fracture of the Patella;" paper by Dr. J. R. Weist, of Richmond, Ind., on "Foreign Bodies in the Air-Passages;" paper by Professor W. T. Briggs, of Nashville, Tenn., on the "Antiseptic Treatment." Reception by Dr. S. W. Gross.

Third Day.—Executive session, in which a series of resolutions was adopted, praying the U. S. Senate to give the usual appropriation of $10,000 for the support of the museum and library of the army at Washington, D. C.

Appropriate resolutions in regard to the deaths of certain Fellows of the association were passed.

Paper by Dr. J. C. Hutchinson on "Hip-Joint Disease;" paper by Dr. H. F. Campbell on "Treatment of Gunshot and other Wounds after Gangrene had Set In;" paper by Dr. Senn, of Milwaukee, on "Fracture of Thigh Bone with Bony Union;" paper by Dr. J. Ewing Mears on the "Intraperitoneal Method of Treating the Pedicle in Ovariotomy."

Election of officers which resulted as follows:

President—Professor S. D. Gross, M.D., LL.D., D.C.L.; *Vice-Presidents*—Drs. E. M. Moore, Rochester, N. Y.; Professor Moses Gunn, Chicago, Ill.; *Secretary*—Dr. J. R. Weist, Richmond, Ind.; *Treasurer*—Dr. John H. Packard, Philadelphia; *Recorder*—Dr. J. Ewing Mears, Philadelphia; *Council*—Dr. R. Beverly Cole, San Francisco, one year; Dr. George W. Gay, Boston, two years; Dr. Hunter Maguire, Richmond, Va., three years; and Dr. H. F. Campbell, Georgia, four years.

Reception by Dr. R. J. Levis.

Adjourned to meet at Cincinnati the latter part of May, 1883.

Earache in Children.—Dr. Sexton found that about 36 per cent. of all school children examined by him in the New York schools recollected having had earache; he infers that the aural affection which gave rise to the pains had also more or less impaired the sense of hearing.

Bovine Virus.—Dr. James S. Cooley, of Luzerne, N. Y., writes: "I have watched with some interest the letters, pro and con, which have appeared in the Record relating to the success, or want of it, which your correspondents have met with in the use of bovine virus for vaccination, and am led to give you briefly my experience.

"Until last summer I have procured the ivory points sold by Codman & Shurtleff, of Boston, and have never found less than 80 to 90 per cent. of them good in primary vaccinations, if used within two weeks from date stamped on the package.

"Last August, in consequence of the presence of small pox in the neighboring village of Glen's Falls, there was an unusual demand for virus, and I requested Dr. Harris, of the State Board of Health, to procure reliable material for me. Failing to secure it in Albany, he ordered two hundred quills to be sent to me from the department in New York City. They were in packages of fifty, hermetically sealed, and I took the utmost pains with them, as the need of thorough protection, if possible, was great. I used quite a number myself, and sent some to other neighboring physicians. Of my own cases, about twelve per cent., or less than one-eighth, proved good in primary vaccinations. The physicians to whom I sold quills reported about the same results.

"Becoming disgusted, although I still had one hundred quills on my hands, I sent to A. B. Husted, the agent in Albany, for twenty-five points. Of these I had *not a single failure* in primary vaccinations, and one-half took in secondary vaccinations. The figures are as follows:

"Primary vaccinations, 10, all took; secondary vaccinations, 8 took; secondary vaccinations, 6 failed; not heard from, 1. Total, 25.

"My method has been to dip the point in cold water, lay it carefully aside until, with a clean lancet or clean ivory point, I have scarified a spot as large as a half dime, taking care to draw no blood, or next to none. I then rub both sides of the point over the scarified surface until the virus appears to have been entirely removed. I then wait until the place is nearly or quite dry, and cover it with a piece of court-plaster. The quills I did not dip in water, as above, but rubbed in the exuded serum until every vestige of virus had been removed.

"I can attribute my failure with the quills only to the poor quality of the virus, as I took equally as good care to have them succeed as I did with the others."

Boro-Glycerine, a compound of boracic acid and glycerine, devised by Professor Barff for preserving meat, is contending with carbolic acid and iodoform as an antiseptic dressing for wounds.

The Medicinal Value of Vegetables.—A celebrated cook-book discusses the medicinal value of vegetables, as follows:

"Asparagus is a strong diuretic, and forms part of the cure for rheumatic patients at such health resorts as Aix-les-Bains. Sorrel is cooling, and forms the staple of that *soupe aux herbes* which a French lady will order for herself after a long and tiring journey. Carrots, as containing a quantity of sugar, are avoided by some people, while others complain of them as indigestible. With regard to the latter accusation, it may be remarked, in passing, that it is the yellow core of the carrot that is difficult of digestion—the outer, a red layer, is tender enough. In Savoy, the peasants have recourse to an infusion of carrots as a specific for jaundice.

"The large, sweet onion is very rich in those alkaline elements which counteract the poison of rheumatic gout. If slowly stewed in weak broth, and eaten with a little Nepaul pepper, it will be found to be an admirable article of diet for patients of studious and sedentary habits. The stalks of cauliflower have the same sort of value, only too often the stalk of a cauliflower is so ill-boiled and unpalatable that few persons would thank you for proposing to them to make part of their meal consist of so uninviting an article. Turnips, in the same way, are often thought to be indigestible, and better suited for cows and sheep than for delicate people; but here the fault lies with the cook quite as much as with the root. The cook boils the turnip badly, and then pours some butter over it, and the eater of such a dish is sure to be the worse for it. Try a better way. What shall be said about our lettuces? The plant has a slight narcotic action, of which a French old woman, like a French doctor, well knows the value, and when properly cooked it is really very easy of digestion."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, June 17, 1882.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The recent meeting of the American Medical Association at St. Paul, Minn., was largely attended, and the usual amount of interest was manifested in the business of its general sessions. As will be seen by a full report of the proceedings in another place, many matters bearing upon the government of the Association were brought up for discussion, and were in turn duly acted upon. The absence of the President, on account of sickness, was sincerely regretted by the members, and an expression of sympathy for him was very appropriately tendered by cable dispatch. His duties were, however, very satisfactorily performed by the Vice-President, who proved himself in every way equal to the occasion. The Committee of Arrangements deserve great credit for the admirable manner in which they attended to their duties. The social element of the meeting was fully up to the average, and the various entertainments were, as usual, well attended.

A notable matter of interest in the business of the general session was the decision of the judicial council denying the right of representation to the Medical Society of the State of New York. But of this we shall remark in another place.

The rule concerning the election of officers and committees from members in actual attendance at the meeting was enforced, but as it worked against the best interests of the Association, a proposed amendment was introduced, which, if adopted, will leave the rule applicable only to the offices of president, vice-presidents, assistant secretary, the chairmen and the secretaries of the sections, the chairman of the Committee of Arrangements, and the Judicial Council.

The question of establishing a journal for the Association was subjected to its annual agitation, and some progress was made in the proper direction. At least it has been determined to ascertain whether or no the profession at large will give sufficient pecuniary support to any periodical managed solely in the interests of the Association. It must be confessed that there is not so much of a desire for an Association journal as formerly. Most of the members are disposed to be satisfied with abstract reports of the proceedings, as already published in the various medical journals, while the papers in full have a fitting place in the yearly volume of "Transactions."

It is a matter of regret that the work in the sections was much below the average in scientific value. There was a great scarcity of papers, and with few exceptions the discussions on the topics presented were of an uninteresting character. This should not be. The Association, in order to command a proper influence with the profession, must rise to its opportunities for better professional work, and prove itself to be something more than a mere administrative body.

THE NEW YORK CODE AND THE AMERICAN MEDICAL CONVENTION.

The recent action of the American Medical Association in refusing to admit delegates from the Medical Society of the State of New York because of the adoption by the latter of a new code, was hardly a surprise. The point upon which the issue was taken was that referring to freedom in consultations as allowed by the New York Society. The decision turned upon a difference of opinion between the two societies as to the rights of medical men in their professional relations to their patients and to each other. We have already said so much on this point regarding the safety of allowing each man to judge for himself as to the fitness of any other practitioner to meet him in consultation, that it seems hardly necessary to go over the ground afresh. The position of the Association in its recent decision has evidently been based upon the assumption that there is danger of countenancing irregular practices on the part of the New York men. This, as we have repeatedly said, is absolutely groundless. The practitioners in New York are as free from such temptation as are those in any other State. There has been a grave misapprehension of the true stand of the New York Society in this respect. It is in precisely the same position as it was before the new code was adopted, save that it guarantees its members against discipline for infringements of that portion of the American Code which has long been a dead letter. The motives which actuated the framers of the new code were beyond the suspicion of being unprofessional or mercenary. The idea was to elevate the regular profession on such a high and liberal platform that there should be no possible reason on the part of others for charging us with bigotry in any shape. It cannot be denied that this is in the line of progress, and gives to all competent

practitioners of every school the opportunities for laying aside their special creeds, their pet dogmas, and elevating themselves to the grade of honest and true physicians. How far they will do this, each regular practitioner can judge for himself and prove to his own satisfaction. The countenancing of homœopathy, eclecticism, or any similar delusion, by such means, is simply absurd. There is always a presumptuous fly on every axle, ready to prove why the wheel moves. Liberality and dogmatism can never have any common ground of honest understanding. One must give way to the other. It is not difficult to see which is the weaker. We venture to say that homœopathy owes its success as a branch of sectarian medicine to the martyrdom which it has enjoyed at the hands of regular medicine. Latterly it has been let alone, and already it is beginning to drop its distinctive title and to abandon its cherished tenets. We simply give this sect and all similar ones no further excuse for being martyrs. We press forward untrammelled by any codical restrictions in our search for simple truth, and others may follow if they please.

As before stated, we think that the question of professional relations in regard to consultation can, from this standpoint, be safely left to work out its own solution, in accordance with the judgment of the individual medical man, without jeopardizing the honor of the profession, without fostering quackery, and without encouraging illegitimate medicine.

If the honor of the profession cannot be left to individual medical men no code, however strict, can be of any use.

We make these statements more for the sake of correcting the many misunderstandings that prevail regarding the true intent and purpose of the new code, than for any idea of criticising the action of the Association in regard to it. That body has an unquestionable right to settle the question in its own way. We give it due credit for acting consistently. It has dignifiedly and resolutely stood still; the Medical Society of the State of New York has moved on. Notwithstanding the attitude of the Association, we do not believe it will have any influence in causing the State society to rescind its recent action, and we are further of the opinion that when the real motives and honest aims of the New York society are properly appreciated and rightly understood, other State societies will follow its good example, and we venture to predict that the Association itself, at no distant day, will do the same. In the meantime we ask our good friends who are of a different way of thinking to give the Society some credit for honesty of intention and sincerity of purpose in this matter, and to trust the honor of the profession of this State in the same keeping in which it has been for so many years, even before the Association itself had an existence or the American code was thought of.

SHOULD MEDICAL STUDENTS BE TAUGHT MATERIA MEDICA?

The above question has been brought up from time to time, and is now being discussed in a lively manner in the *Students' Journal*. Materia medica is the science which teaches the characters of drugs. It is an essentially different branch from therapeutics, with which it is so generally associated. In many foreign schools the two studies are entirely distinct, as they should be. There is one American college, and only one, so far as we know, which fully recognizes this difference, and has a separate professor for each study.

Professor Huxley, in his address on medical education, puts the question as well as possible: Materia medica, he says, as far as it is a knowledge of drugs, is the business of the druggist. The necessity of subdivision of labor is acknowledged in other callings, and should be in that of the doctor. It is all very well for a physician to know that castoreum comes from an animal and castor oil from a plant, and how they should be prepared; but for all practical purposes of his profession, that knowledge is of not one whit more value—has no more relevancy than the knowledge of how the steel of his scalpel is made. Of what use is it, we are asked, for the doctor to know that uva ursi is the leaves of the plant *arctostaphylos uva ursi*, grown in Northern Europe and Asia; or that rhubarb has often a hole drilled through each piece, which was made there to pass a string through in order to dry the drug: or that the impurities of opium are sand, stones, vegetable extracts, treacle, etc.

Every physician, as he recalls his student days, will remember how much of useless cramming he had to take upon himself in this particular branch.

It must be admitted that our modern text-books show great improvements in this direction, and leave out a great deal of matter which lumbered up the older works. There is a certain amount of knowledge regarding materia medica which it is essential for the physician to know. Indeed, materia medica in all its extent might be made, like botany, a useful preliminary study. The amount forced upon medical students, however, in regular curriculum, should be carefully limited, and its distinctness from therapeutics made manifest.

REFORMS IN THE CORONER SYSTEM.

The efforts of the Medico-Legal Society and of many of our citizens to secure a reform in the coroner system must be postponed for the present. Our State Legislature adjourned without taking action upon the measures suggested.

The profession should, however, bear in mind that changes are much needed and be ready to press the matter when the opportunity again occurs.

At present we have four coroners in each county

In that of New York there are, in addition, four deputies. These deputies are physicians, and do most of the work. In all counties but that of New York the coroners are paid by fees. In this city they receive a salary which virtually amounts to about $7,000. The deputies get $3,000. The coroners are elected by popular vote, and they then appoint their deputies.

It would be impossible to abolish the coroner system, at least at present, since the office is a constitutional one.

It is only proposed, therefore, now to make some changes in the system in this city. These changes are not great. They consist in abolishing three of the four coroners, and in having four medical examiners who will practically do the same work as that now performed by the deputy coroners. In addition, the appointment of the medical examiners is to be taken out of the coroners' hands and placed where impartiality and competence will be exercised —if such a place can be found. These changes are not very radical, but they will, apparently, get the system out of politics to a great extent; they will certainly reduce expenses very largely, and will furnish us with competent men.

THE "PAINTED SICKNESS" OF MEXICO.

A curious disease has been recently described, for the first time, by Dr. Iryz, of Mexico. It is known as the Painted Sickness or Mal de Pinto. It is endemic in Southern Mexico and Central America, where it seems to have existed for a long time.

It is a contagious disease of the skin, characterized by abnormal pigmentation, itching, and desquamation, a peculiar odor, and characteristic sensation on touch. The general health is not affected. There are no constitutional symptoms. It has a chronic course and may run on for many years. It is curable under treatment, however, and sometimes it ceases spontaneously.

The disease begins with a patch of discoloration upon some part of the skin, accompanied by desquamation and itchings. The discoloration spreads as a rule from this central starting point. It is unsymmetrical, and may be either discrete or confluent.

Dr. Iryz describes four different varieties of the disease, the classification being based chiefly upon the color of the patches. These varieties are black, blue, red, and white. In the first two the process is superficial, involving only the epidermis; in the latter two forms the dermis and rete-mucosum are affected.

The black and blue varieties often coexist. The surface becomes covered with dark patches, so that in extreme cases the patient looks like a negro, in mosaic. The affected part becomes somewhat raised and, though at first dry, is eventually moist and gummy. There is no pain, tenderness, or sign of inflammation.

The white and red varieties may also coexist. The patient becomes more or less covered with patches of a perfectly white, a rose, or a red tint. This gives him a variegated appearance which is the reverse of beautiful, especially when the face is affected. The diseased skin is hard, condensed, and has apparently lost most of its capillaries. Islets of dark pigment are sometimes found in the light-colored patches. In some cases the patient's hair, as well as skin, becomes perfectly white. This whiteness is much more marked than in vitiligo, and cannot be affected by pinching or pressure. The dark patches spread much more rapidly than the light ones.

The odor is peculiar and disagreeable, resembling somewhat that from mouldy garments.

The disease is treated by attention to hygiene and the administration of large doses of arsenic.

THE CONTAGIOUSNESS OF TUBERCULOSIS TESTED AGAIN.

In remarkable contradiction to some of the conclusions of Koch, which have been so effusively laid before the public, are certain experiments recently made by Professor Siedamgrotzky (*Archiv für Thierheilkunde*).

A considerable number of lambs and pigs—animals which have little tendency toward tuberculosis—were fed upon the caseous substance from cavities in cows' lungs and upon the milk of tuberculous cows. The pearly nodules of bovine tuberculosis and the tubercular masses from human lungs were also used. Four or five ounces were given per day for several days. After waiting for various periods of time the animals were killed and examined. Control experiments were performed.

The following table will best show the results:

Animals Fed on Tuberculous Matter of Various Kinds:

Number of Lambs.	Killed on	Post-Mortem Appearances.
1	117th day	Small caseous cavity in one lung.
1	269th day	Healthy.
1	102d day	A few tuberculous ulcers in small intestines.
1	135th day	A few tuberculous ulcers in small intestines.
2 control animals	.....	A few white and calcified nodules in intestine, bronchial glands, and lungs.

Animals Fed on Milk of Tuberculous Cows:

Kind of Animal.	Duration of Milk Feeding.	Post-Mortem Appearances.
6 pigs, 2 lambs,	142–153 days	A few tubercles in liver of the two lambs. A few lymphomatous nodules in liver of six pigs. Also calcareous nodules in lymphatic glands.
1 lamb and 2 pigs, as control animals	.....	In lamb, healthy; in pigs, "lymphomatous" nodules in liver and lungs.

The experiments give no positive support to the theory of the communicability of tuberculosis from the lower animals to man. In no case did any notable symptoms, or any fatal results, follow the experiments.

It can be said that the animals experimented upon did not furnish so favorable a nurture-ground as do human lungs for the tubercular poison or bacillus.

If, however, this bacillus is only an exciting cause, it must be proved, to satisfy Koch's hypothesis, that it is the specific and the only essential one. This presents much difficulty.

THE AUTHOR OF "RAB AND HIS FRIENDS."

THE medical profession lost one of its brightest ornaments in the death recently of Dr. John Brown, of Edinburgh. No medical man of modern times, except Dr. Holmes, has been so widely known and warmly esteemed for his literary work. "Rab and His Friends" has become a household classic. Few can read it without some kindly feelings toward its author, whose personality is made so manifest therein.

Dr. Brown was a pupil of Professor Syme, whose character he greatly admired, and several times depicted. Of his professional life a biographer says:

"Entering life as a physician, Dr. Brown in time obtained a practice, moderate in range, but of a peculiar kind. To each family which he attended, he could not come merely as a medical functionary, feeling their pulses and writing out prescriptions, but he must visit them as a friend, entering into their joys, their cares, and their sorrows, and giving them the full sympathy of his most tender heart. To his patients this was soothing and delightful, but to himself it involved a heavy draft on his sensitive spirit."

Dr. Brown was interested in medical work and progress, but himself wrote little upon purely medical subjects. His essays, stories, and criticisms were all of them short, and the result of work in leisure hours.

Their literary characteristics this is not the place to discuss. They are full of robust English, and show the earnestness, originality, and peculiar personal charm of the author.

We have regretted that the English medical journals, with one or two exceptions, paid so little attention to the event of his death. Many upon this side of the water learn of it with a genuine regret.

A TEN-OUNCE BABY.—A married woman, aged thirty, in this city, is reported to have given birth to a living son weighing only ten ounces. She and her husband are of natural size. Two years ago she gave birth to a boy who weighed but eleven ounces. This infant is now almost the natural size of a two-year-old.

American Medical Association.

THIRTY-THIRD ANNUAL MEETING.

Held at St. Paul, Minn., June 6, 7, 8, and 9, 1882.

TUESDAY, JUNE 6TH—FIRST DAY.

THE Association met in the Opera House, and was called to order at 11 A.M. by DR. ALEX. J. STONE, of St. Paul, Chairman of the Committee of Arrangements.

Prayer was offered by RT. REV. JOHN IRELAND.

A hearty welcome was then extended to the Association by DR. STONE. GEN. LUCIUS F. HUBBARD, Governor of Minnesota, then delivered the formal address of welcome, in which he briefly recounted the virtues of the medical profession and extolled the healthful advantages offered by the great Northwest.

Ex-Presidents Dr. Lewis A. Sayre, Dr. N. S. Davis, Dr. J. M. Toner, and Dr. Beverly Cole were invited to seats upon the platform.

PROTESTS.

The SECRETARY then read protests against the admission of the delegates from the State of New York, received from the St. Louis Medical Society, the Georgia State Medical Society, Medical Society of the State of Pennsylvania, the Philadelphia County Medical Society, the Indiana State Medical Society, the Medical Society of the District of Columbia, the Grant County Medical Society of Indiana, the Esculapian Medical Society of the Wabash Valley, the State Medical Society of Arkansas, the State Medical societies of Kentucky, Tennessee, and Missouri.

A protest against the registration of Dr. S. P. Collings, was offered by Indiana and Arkansas Medical societies.

The above protests were referred to the Judicial Council.

The Secretary also read letters from Dr. Lewis A. Sayre and Dr. S. D. Gross, expressing in emphatic terms dissent from the action of the Medical Society of the State of New York, concerning the code of medical ethics, and asking that the association take no uncertain action upon the question.

Dr. Sayre's letter was addressed to the Secretary of the Medical Society of the State of New York, declining to act as a delegate from that society to the American Medical Association, because the society had ignored the code of medical ethics which binds them as members of the association, and therefore they must necessarily be refused admittance.

Dr. Gross in his letter expressed deep regret that he would be unavoidably prevented from participating in the deliberations of the Association. He regarded "the late extraordinary proceedings of the Medical Society of the State of New York as an outrage which every member of the profession should consider as a deep personal insult and which the association should rebuke in the most stern and uncompromising manner."

The Chairman of the Committee of Arrangements then introduced to the Association as its presiding officer the first Vice-President, DR. P. O. HOOPER, of Arkansas, who delivered the annual address.

THE PRESIDENT'S ADDRESS.

The Vice-President first referred to the absence of the distinguished President, Dr. J. J. Woodward, on account of sickness, and paid him a handsome

and deserved compliment. He then made to the medical profession of the beautiful city of the great Northwest grateful acknowledgment for the cordial reception extended to the Association through the Chairman of the Committee of Arrangements and the Governor. Since the foundation of the Association a generation have passed away. A few, upon whom "age sits with decent grace," still remain, and among those, *facile princeps*, is N. S. Davis, without the mention of whose name there could be no appropriate reference to our beginnings.

"We have reached a natural resting-place, where we can pause and look back upon our journeying and progress." "The years of the existence of the association have been years of wonderful activity. The bounds of the horizon of investigation have been stretched out. The fierce light of truth has disclosed the harmless nature of many a veiled superstition. Much, regarded for centuries as but the dream of philosophers, has proven reality. Predictions which have been supposed to be naught but theories, have been verified. Investigation and discovery have been stimulated to a wonderful degree. And a powerful incentive to this activity and labor is the appreciation and reward of the worker. Every thinker and discoverer has a fit audience and substantial recognition. The scepticism of the age is not afraid of the new and startling. But withal there is no recklessness or immaturity in statement or theory or discovery. Darwin waited thirty years before he published the outgrowth of his first conception of the thought of natural selection. Buckle spent a whole lifetime of toil and unwearying labor in accumulating material for a hypothesis." From this general review the Vice-President passed to the purposes of the organization—namely, "to cultivate and advance medical knowledge, elevate the standard of medical education, and to promote the usefulness, honor, and interests of the medical profession." Have all the hopes indulged in at its inauguration been realized? Everything aimed at has not been accomplished, but the association has been an active and powerful agent in disseminating useful medical knowledge, and no similar institution has ever been more successful in carrying out its chief object, the promotion of science.

The subject which has engaged the attention of the society most, was that of medical education and reforms in medical teachings. In that direction much had been accomplished. Finally, to put into effect the many devised and conflicting plans offered, the idea of an American College Association was brought forward and its subsequent organization effected. That association may not have done everything anticipated by its most sanguine advocates, but experience and experiment would give increasing assurance of its value, and its certain success was only a question of time.

But beyond that, much had been done for science, as exhibited in the thirty-two ponderous volumes of "Transactions," containing valuable contributions to the medical literature of the last ten years. The establishing of a

MEDICAL JOURNAL IN PLACE OF THE VOLUME

has been brought to the attention of the members, and he sincerely hoped that the able committee which had the matter in charge would see their way clear to earnest, unanimous, and persuasive recommendation for adoption at this meeting.

To this Association belongs the honor of introducing to the attention of the people of the different States

THE IMPORTANCE OF SANITARY LAWS.

That the efforts had been in a great measure successful, was evidenced by the popular appreciation of sanitary organizations.

Under this head special reference was made to the question of small-pox. The people as well as the profession had been neglectful of this matter. If possible, a provision should be made by law for universal vaccination. The argument that

COMPULSORY VACCINATION

is an infringement on human rights was untenable. Laws are made for the protection of the greatest number, and something of natural right must be given up to the State and some restriction must be placed upon all.

Reference was made to the subject of *relief for medical brethren, disabled and helpless*, and especially for the widows and children of those who have left for their support "nothing except the sweet smelling reward of unselfish lives."

THE CODE OF ETHICS.

"We have a code of medical ethics, the best ever given for the government of medical men, of acknowledged force and effect, of universal acceptance in every State in the Union, and it is now too late for any single physician or State society to oppose or set at defiance the moral power of this body."

Had the Association done nothing else than to originate and adopt these beautiful precepts, which should govern in our relations to each other, our patients, and the public, it would have done service, entitling it to everlasting gratitude and to an imperishable name in the annals of our country.

"There has been recently exhibited, by a few, a disposition to be restive under the operation of certain portions of the code. It may not, perhaps, be becoming in me to discuss this matter here, but I may be permitted to suggest that we should not retreat from our well-chosen lines of defence. The broad lines of demarcation between the irregular and the true physician should never be obliterated. I do not say that the time may never come when your organic laws will require modification and amendment; but until that time arrives, when radical changes are demanded in the light of a perfect knowledge, let us maintain, without internal strife, the unsullied standard of professional honor and morals, now 'full high advanced,' in our midst, and decline association with those who will not recognize that flag, or who, having once recognized, have abandoned it.

"We should, without reservation, declare the perpetuity of this Association, and renew our vows of fidelity to its constitution and laws."

The Vice-President then made a fitting and touching reference to the death of Dr. John T. Hodgen, President of the Association at its annual meeting in 1881.

In the natural order of events, the responsibilities now borne by the veterans must soon be transferred to the shoulders of the younger members; and in view of that fact, the latter were urged to carefully study the spirit and workings of the organization, to the end that its prosperity might be perpetuated.

On motion by DR. BRODIE, the thanks of the Association were extended to the President for his address, and a copy requested for publication.

The Secretary read a letter from Dr. Woodward, President, expressing his appreciation of the honor conferred upon him and his sincere regrets at his inability to be present at this annual meeting.

On motion by Dr. Cohen, of Philadelphia, a cablegram was sent to Dr. Woodward, expressing regrets at his absence and hopes for his speedy restoration to health.

A letter of regret from Dr. H. D. Holton, Brattleboro, Vt., was read and ordered entered on the minutes.

On motion, the members of the Minnesota State Medical Society, now in session in St. Paul, were elected members by invitation.

Dr. N. S. Davis, of Chicago, presented a preamble and resolution in behalf of the Woman's National Christian Temperance Union, asking the Association to express its approbation of the introduction of a more perfect study of physiology and hygiene, including a knowledge also of the evil effects of intoxicating drinks, into all public schools supported at public expense. It was referred at the request of Dr. Davis to the Section on State Medicine and Medical Jurisprudence.

After the reading of the registration list, the Association adjourned, to meet Wednesday morning at 10 o'clock.

Wednesday, June 7th—Second Day.

The Association was called to order at 10 A.M. by Vice-President Dr. Hooper, and prayer was offered by Rev. D. R. Breed.

The following were announced as the

COMMITTEE ON NOMINATIONS:

J. A. Dibrell, Jr., Arkansas; H. S. Orne, California; J. Hawes, Colorado; W. G. Bronson, Connecticut; S. B. McGlumphy, Dakota; W. F. Holt, Georgia; T. W. Worrell, Illinois; W. Lomax, Indiana; T. J. Caldwell, Iowa; J. Bell, Kansas; L. S. McMurtry, Kentucky; J. W. Dupree, Louisiana; T. A. Foster, Maine; Wm. Lee, Maryland; M. G. Parker, Massachusetts; Foster Pratt, Michigan; W. W. Mayo, Minnesota; H. A. Gant, Mississippi; A. J. Steele, Missouri; L. J. Abbott, Nebraska; S. S. Clark, New Jersey; E. Grissom, North Carolina; N. C. Husted, New York; X. C. Scott, Ohio; A. Fricke, Pennsylvania; Ariel Ballou, Rhode Island; J. B. Lindsley, Tennessee; W. H. Park, Texas; S. W. Thayer, Vermont; F. D. Cunningham, Virginia; N. Senn, Wisconsin; W. D. Marmion, District of Columbia; John M. Brown, U.S.N.; G. Perrin, U.S.A.; O. W. Miller, U. S. Marine Hospital Service.

A protest against the registration of D. W. Day, of Wisconsin, was referred to the Judicial Council. A resolution providing for the payment of the Treasurer's travelling and hotel expenses while in attendance at the annual meeting was adopted.

THE TERM "ALLOPATH."

Dr. Dennison, of Colorado, offered the following, which was referred to the Judicial Council:

In order to correct a misconception which largely prevails in the public mind, and to some extent prevails among members of the medical profession, as to the liberty of action authorized by this Association in the treatment of disease, we deem it proper to make a declaration of principles broadly applicable to the healing art as sanctioned and practised under our code, to wit: Rational medicine, being based upon experience and pathological research, demands absolute freedom in the selection and administration of materia medica; and there is nothing in the code of ethics of the American Medical Association prohibiting the use by its members of any known and honorable means of combating disease. Furthermore, as contributing to the alleviation of human suffering, we hail with pleasure and gratitude every discovery in etiological and therapeutical science by whomsoever made.

We therefore reject as untrue and obnoxious the term "Allopathists" as applied to the members of this Association by dogmatists and extremists without its fold.

First.—Because it tends to convey the erroneous impression that we are restricted to the choice of remedies and the method of using them by other than the limits of rational science.

Second.—Because for any association of men claiming to practise the profession of medicine to adopt a name based upon limited and conjectured theories of therapeutics for the purpose of disignating a particular school of medicine, we have always held, and still regard, as unscientific in principle and dangerous in practice.

Dr. J. H. Packard, of Philadelphia, then read the report of the Committee on

JOURNALIZING THE TRANSACTIONS.

The report was accepted and ordered printed and was made the special order for Thursday morning.

The amendment offered at the last annual meeting, providing for such a change as would allow

PERMANENT MEMBERS TO VOTE,

was laid upon the table.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN MEDICINE.

Dr. J. A. Octerlony, of Louisville, introduced his address with a quotation from Lord Bacon who said that "medicine is a science which hath been more professed than labored and yet more labored than advanced, the labor having been rather in a circle than in progression. For I find much iteration but small addition."

However well deserved this severe criticism may have been in 1605, it is not applicable to medicine of our days. Could Bacon in the full possession of his imperial intellect behold the progress our science has made since his time, he would quickly perceive that the labor has not been in a circle, but in progression. He would have, perhaps, to complain that there was not sufficient iteration while he would find that the addition has been immense.

From this point, Dr. Octerlony proceeded to give a brief *résumé* of the advancement which has been made in some departments, and said that more progress had been made during the last twenty-five years than in the previous twenty-five hundred years. Even in the middle of the eighteenth century the knowledge relating to scarlet fever and measles was so meagre that the two diseases were confounded with each other. It was not until 1768 that they were identified.

In the year 1840 the name endocarditis was unknown. Great has been the work and vast and multitudinous the facts which have been accumulated, but the process of crystallization into general laws has been slow. The want of a great central law to give certainty and precision to medical science is keenly felt. In viewing the present state of medicine and endeavoring to estimate the character

and rate of progress, two lines of inquiry opened before him. The one followed the current of literature; the other, and that with which he had been most closely identified, the tendency of the work of professional labor and thought during a longer period, with the anticipation of thus more clearly discerning the direction and rate of its development.

Reference was first made to the subject of *inflammation* as one intimately interwoven with medicine, and the insufficiency of the old definition pointed out, together with the successive steps taken to bring its present definition to be "a disorder of nutrition, a temporary exaggeration of the nutritive irritability of the part affected." There is no sharp line of demarkation to be drawn between physiological action and inflammation. The processes of increased nutrition in inflammation differ from the physiological in degree rather than in kind.

Not many years ago the *nervous system* was the *terra incognita* of medicine; but now many heretofore obscure affections are well understood.

Pulmonary consumption affords another illustration of advancement made in medicine.

In hepatic pathology the recognition and description of hypertrophic cirrhosis of the liver is of comparatively recent date. Billroth had performed the brilliant operation of removing the pylorus, but simple washing out the stomach constituted an improvement in therapeutics of a higher order.

Dr. Octerlony then gave a *résumé* of what the microscope had done for medicine. Leprosy had been found by Eklund, of Sweden, and Hauser, of Norway, to depend upon a vegetable parasite—"micrococeus lepræ" of the former, and "bacillus lepræ" of the latter—and Neisser, of Breslau, Ferd Kohn, and Koch had confirmed the correctness of these observations. The cause of typhoid fever had been found to be the "ileotyfofyton Kleinii," and the blood of a scarlet fever patient contained the "plax scindens." It had been demonstrated by Dr. H. C. Wood that diphtheria is due to the presence of microscopic fungi, and Tommasi, of Rome, and Klebs had proved that malarial fever is caused by the "bacillus malariæ."

In helminthology great advances had been made by means of the microscope, and the danger to life caused by trichinæ was not known until the year 1860.

In all this work the exclusive systems in medicine have had no share whatever. So far as any true advancement is concerned they have been entirely barren. Not a single oasis relieves the dreariness of the view. Not a single flower of science has blossomed in their uncongenial soil. Not a single original contribution has been made by them to anatomy, physiology, histology, chemistry, pathology, etiology, and public hygiene. Nor is it known that any one belonging to the ranks of these irregulars has ever achieved distinction in the fruitful field of other sciences in which the cultivators of scientific medicine have won so much glory, and have performed such noble exploits. The names of Linnæus, Berzelius, Draper, Nott, and Leidy, and many others form brilliant constellations which shall continue to illuminate the firmament of science after homœopathy and kindred delusions shall have been swept away by the relentless winds of oblivion.

But with all this, that which still remained desirable was some general law which would give "unity to our methods and precision to our results."

The address was referred to the Committee on Publication.

REPORT OF THE JUDICIAL COUNCIL.

The report was read by DR. N. S. DAVIS, and was as follows:

1. In regard to the Nebraska State Society referred to us last year, the council report that a careful examination of the documents and matters involved in the protest of certain members of the Nebraska State Medical Society against the admission of said society to representation in the American Medical Association show no proper cause for such protest at the present time, and consequently the society is entitled to its full representation, by delegates, in this Association.

2. In regard to the resolution concerning the use of remedies controlled by a patent copyright or trade mark, etc., which was reported from the section on practical medicine and materia medica, and by the Association referred to the Judicial Council last year, the council has decided, after careful examination, that inasmuch as said resolution includes matter not referred to in the code of ethics, and said code contains all that is necessary for the proper guidance of members of the medical profession, therefore, the resolution should not be adopted by the Association.

3. In regard to the protests against the action of and the reception of delegates from the New York State Medical Society, which was referred to us, the judicial committee report as follows:

Having carefully considered the code of ethics adopted by the New York State Medical Society at its annual meeting in February, 1882 (as furnished by the secretary of said society), the judicial council find in said revised code provisions essentially differing from and in conflict with the code of ethics of the association, and therefore, in accordance with the provisions of the ninth by-law of this Association, decide unanimously that said New York Medical Society is not entitled to representation, by delegates, in the American Medical Association.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

DR. H. O. MARCY, of Boston, accepting precedent, departed from the rule concerning the annual address, and directed attention to the subject of

FIBROID TUMORS OF THE UTERUS AND THEIR TREATMENT.

As introductory, the Association had reason for congratulation with reference to original investigation which its members had made in the field of labor pertaining to gynecology, and the name to be mentioned first was that of Washington L. Atlee, who, more than a generation ago, received the prize for an essay on "The Surgical Treatment of certain Fibrous Tumors of the Uterus hitherto considered beyond the Resources of Art." Since that time Sims, Emmet, Thomas, and others had done much to establish the value of Dr. Atlee's observations. These tumors are of the rarest occurrence prior to puberty. They have received the names myoma and myofibroma. Dr. Marcy then gave the histological features of the growths, and said that they were composed of bundles of muscular fibres and capillary vessels, and strictly speaking, should be called myoma. The soft are less common than the firmer varieties, and as a whole they are divided into three classes: (1) the subserous, (2) the interstitial,

and (3) the submucous. Attention was then directed to the differential diagnosis, and this was followed by reference to the liabilities in connection with such growths, such as peritonitis and consequent adhesions, injury from twisting of the pedicle, etc.

The peculiarities of each variety were then pointed out. Experience had taught him that the fibrous tumor when still increasing in size cannot be enucleated from a capsule. It may be torn out, but it will be at the expense of the integrity of the uterine tissue.

With reference to the question of

THE CAPSULE,

from the examination of thirty-three specimens, Dr. Marcy had reached the conclusion that there could be demonstrated, not only the formation, but the singular simplicity of the tumor and its investing capsule.

The peculiarities of the submucous and the subserous varieties were then mentioned, and from these the writer passed to the consideration of fibromyoma and submucous polypi of the cervix.

The next topic was the pathological changes which may take place in the fibro-myoma, such as inflammation, gangrene, and cretaceous degeneration. Hemorrhage is not a rare occurrence in connection with these growths. Retrogressive metamorphosis occurs, but it has been actually observed in only a few instances.

The trophic changes observed after the menopause have been ascribed to a lessening of the muscular elements, and the very decided increase of the connective tissue. His own observations failed to substantiate such conclusion, but led him to the opinion that the proportions of the two elements are not much changed. The symptoms to which these tumors give rise are varied, and some space was devoted to their consideration.

In many cases fibrous tumors had been reported as having been absorbed, and thus to have disappeared. There are so many sources of error that most of these cases must be regarded as mistakes in diagnosis. There are, however, a considerable number of cases in which this change undoubtedly occurred. A careful study of myomatous growths and their development, leads to the general conclusion that such pathological conditions would in only a very small degree be amenable to medication. The remedy which has the greatest confidence is ergot, and yet this method of treatment is extremely uncertain. The physiological action of the drug was then given with detail.

The only cases in which he had been able to obtain any satisfactory results from the use of ergot were those of the submucous variety.

Dr. Marcy then passed to the consideration of

THE METHODS OF SURGICAL INTERFERENCE.

With reference to dilating the cervix, splitting the capsule, and cutting deep into the tumor itself, experience had shown that such measures should be adopted only in exceptional cases.

Concerning the submucous fibroids, the cervix might be dilated or divided, the tumor seized with strong forceps and enucleated, or the tumor might be divided and removed in pieces. But avulsion, or much force, however applied, blind dissection with the knife or scissors, the écraseur or the galvano-cautery wire should rarely be put in practice.

A modification of Thomas' spoon-saw was exhibited. The instrument was double, consisting of serrated scoop at each end, the larger of which was fenestrated so that the finger might be used in the loop as an intelligent guide.

The large interstitial variety had at one time usually been considered as beyond the aid of surgery. But under the stimulus given by Atlee, Sims, Emmet, and Thomas, remarkable results had been obtained. Removal of the ovaries had been recommended by Dr. Battey, of Georgia, for rapidly growing myoma in certain cases. With reference to *laparotomy*, the dangers were from shock, hemorrhage, peritonitis, and septicæmia. The measures for controlling these had been made so adequate that the operation was justifiable in certain cases.

Dr. Marcy then described his method of securing the stump. The exposed tumor is encircled at its base by a sheet of rubber, in the centre of which is an opening reinforced by a rubber ring of considerable thickness and of various sizes. Around this is tied a rubber cord, sufficiently tight to control hemorrhage. The great bulk of the tumor is then cut away. Just above the constricting rubber the pedicle is secured through and through by means of the shoemakers' stitch, enclosing only a comparatively small portion of the tissue, and uniform pressure is carefully continued until the stump is covered.

CONCERNING DRAINAGE,

the opinions of Wells, Keith, Sims, Thornton, and others were given, and the advantages and disadvantages presented.

Dr. Marcy believed that Mr. Lister's antiseptic rules were of as great importance and value here as in general surgery. The spray is a minor factor in the antiseptic treatment. He who becomes familiar with its broad principles of sound philosophic reasoning, its careful detail of method, its astonishing array of demonstrative facts, will need little urging to give it an enthusiastic support.

The address was fully illustrated by means of microscopic slides and photographs enlarged upon the screen by the aid of the oxy-hydrogen and solar lights.

On motion, the thanks of the association were extended to Dr. Marcy and his corps of assistants for the address and the demonstrations.

The association then adjourned to meet on Thursday, at 10 A.M.

THURSDAY, JUNE 8TH.—THIRD DAY.

The Association was called to order at 10 A.M. by VICE-PRESIDENT HOOPER.

Prayer was offered by Rev. M. N. GILBERT.

A telegram from Colorado and resolutions from the State Medical Society of Georgia reaffirming their devotion to the American code of Medical Ethics were read.

The special order after the report of the Committee of Arrangements being the consideration of the report of the Committee on

JOURNALIZING THE TRANSACTIONS,

the report, of which the following is an abstract, was discussed.

After enumerating the various sources of revenue for the Association, the committee concluded that unless the Association can be made far more stable and comprehensive in its character, with a truly permanent membership, embracing and interesting a vastly greater proportion of the profession, it is

idle to talk of its establishing and maintaining a journal.

To this end the first step is to adopt the changes in the plan of organization, etc., of the Association, proposed last year, by virtue of which the membership would be thrown open to all members of State and county societies upon application, by the payment of an annual fee of five dollars—such membership to constitute the holder a subscriber to the journal, and to be forfeited by non-payment within three (four, or six) months of the commencement of the journal year. Any such member being elected a delegate to a meeting of the Association might be taxed one dollar additional as a registration fee, toward defraying the expenses of the meeting. Should any delegate not be already a member by application, we would suggest his being taxed six dollars, and thereby constituted not only a member of the Association but a subscriber for the journal for that year.

Supposing the Association to have succeeded in putting the pecuniary question on a satisfactory basis, we may now consider the mode in which the business part of the enterprise could be carried on. Were it possible to select at once a perfectly suitable man to take charge of this whole matter, such an arrangement would be the most economical plan, and the experience of the British Medical Association is strongly in its favor. But unless the right person could be more readily found than it seems to us at all likely, it would perhaps be safer and more feasible for the Association to enter into a contract with some well-known and responsible publishing house to issue the journal for them, upon such terms as may be found available. To go into the details of such an arrangement would be premature and at present useless, but we may say that the Association should strictly reserve to itself the control of all but the purely business part of the enterprise, even as regards the advertisements to be admitted, and that the editor and his assistants should be designated, employed and paid under its direction.

This leads us naturally to the mention of a matter of very great moment—the propriety of obtaining a charter for the Association. We are not unmindful of the fact that this is a step requiring careful consideration in view of possible embarrassments in matters of discipline, etc.; but it may be that it is a necessity on the part of a body contemplating a business undertaking like that under discussion, involving the making of contracts and the assumption of large annual expenditures. It may be that no prudent publisher, manager, or editor would be willing to assume the duties devolving upon him in such a scheme, upon the mere promise of a few men connected with a society of uncertain membership and equally uncertain income, unless those men gave their personal obligations for the expenses incurred. This they can scarcely be expected to do; and unless the objections to such a course are insuperable, it would be better for the Association to authorize its officers and standing committees to apply in its behalf for a charter. Such application may be made in any State to the proper court, or perhaps Congress might be asked to pass an act of incorporation. Upon these points it would, of course, be requisite to have legal advice.

Next, as to the mode of appointment of the editor. Upon the selection of a suitable man will hinge, in a very great measure, the success of the whole enterprise. He must be possessed of intellectual ability, firmness, tact, and judgment, free from partisanship, of high professional and moral tone, and of such standing as will enable him to attract the support and secure the influence of the best class of contributors. It is very desirable that the editor's relation to the Association should be such as to leave him, as far as may be, untrammelled, while still responsible for the due discharge of his functions; that the arrangement should be such as to make it worth while for a suitable man to accept the position, and still to preserve for the Association a just and equitable control of it. There would be obvious difficulties in the way of an election by the whole body annually, and it seems to us that the matter can hardly be placed to advantage in the hands of any of the existing committees. We would, therefore, propose that there should be elected by the Association a board of trustees, nine in number, of whom three shall serve one year, three two years, and three three years; and that annually thereafter there shall be elected three gentlemen to take the places of those whose terms expire, and to serve for the ensuing three years. We further suggest that, when the establishment of this board is effected, a provision be introduced that retiring trustees be ineligible for re-election until the next annual meeting. It would perhaps be advisable that the various sections of the country should be represented in this board; yet, for the facilitation of business, the trustees should not be too far apart.

As to the mode of nominating the trustees, this might be done by the Committee on Nominations, or, what would perhaps be better, by a special committee composed of the President of the Association and the chairmen of the several sections at each annual meeting, the nominations so made to be acted upon by the Association at its next annual meeting. In case of the death or declination of any gentleman so nominated before the election, another name might be presented by the same committee, or perhaps by a committee similarly constituted, to be voted upon at the same meeting which would have entertained the first nomination. In the hands of these trustees might be placed the appointment of the editor, which would be best made for an indefinite term, the engagement to be dissolved by either party only upon three months' notice; and if this is done by the trustees, the editor to have the right of appeal to the Judicial Council, upon whose motion, if they see proper, the matter may be brought before the Association at its next annual meeting, and decided by a three-fourths vote of the members present. In case of the death or resignation of the editor, the trustees to elect his successor in the same way and on the same terms.

We would recommend that the appointment of the assistant editors be with the editor (subject to the approval of the trustees), and that the salary of the editor should be $6,000, out of which sum he should pay his assistants, making his own terms with them.

The trustees should report annually to the Association, giving a statement of the expenses and receipts of the journal; orders for such expenses to be honored by the Treasurer of the Association only when signed by the editor-in-chief, and countersigned by the chairman and two other members of the board of trustees.

As to the place of publication, your committee do not feel prepared to make any suggestion. It would, however, be desirable that it should be as nearly central as possible, and that it should not be lightly

changed. Wherever a suitable editor can be found, there also it is probable that circumstances would favor the establishment of the publication office.

We recommend that the name of the journal should be "The Journal of the American Medical Association," and that the terms to outside subscribers should be $6 per annum.

It remains now for us to indicate a method for the actual setting on foot of this enterprise. We would propose that the board of trustees be appointed, and that they proceed at once to issue a circular to be sent to all regular physicians, as far as possible, in the United States; this circular to set forth the plan of the journal, the advantages looked for from its establishment, and the terms upon which it may be had. Should the responses to the circular be sufficiently encouraging—as, for example, if within three months 2,000 names should be secured, and pledges given or subscriptions received, the board might proceed to elect an editor and to make arrangements for the commencement of the publication at the earliest practical period.

We would suggest that the Committee on Publication should be appointed as usual, but that they be instructed to be guided by the decision of the board of trustees as to the character of the publication, if any, which they shall make.

All of which is respectfully submitted.

[Signed] JOHN H. PACKARD,
N. S. DAVIS,
L. A. SAYRE,
J. S. BILLINGS,
B. COLE,
W. B. ATKINSON,
R. J. DUNGLISON,
Committee.

DR. N. S. DAVIS offered the following resolutions, which were seconded by DR. BRODIE and unanimously adopted:

Resolved, That the interests of the Association would be promoted by the publication of its transactions in a weekly medical journal under its own control, instead of an annual volume, as heretofore, provided it could be done without involving pecuniary embarrassment or so far engrossing its funds as to prevent the annual encouragement of original investigations by its members.

Resolved, That so much of the report of the Committee on Publishing the Transactions as relates to the increase of membership of this Association, by applications from members of State and local societies, be and the same is hereby approved.

Resolved, That so much of the report of the Committee of Journalizing the Transactions of the Association as relates to the appointment of a board of trustees, nine in number, and their duties, be and the same is hereby adopted, and that the President of the Association now appoint a special committee of seven to recommend to this meeting of the Association the names of nine members for election to constitute said Board of Trustees.

Resolved, That the Board of Trustees so appointed be requested to proceed as early as possible to arrange a plan of a medical journal, to be called the Journal of the American Medical Association, and that they send circulars explaining such plan, and asking pledges of support by actual subscription, to the members of the medical profession throughout the whole country, and thereby ascertain as reliably as possible what degree of support the proposed journal can have, as a basis of commencing its publication, and that said board also proceed to ascertain and agree upon the best method of publishing said journal, the best editorial services it can secure to take charge of the work, and the best place of its issue.

Resolved, That said Board of Trustees be and are hereby instructed to retain, under all circumstances, in whatever plans or contracts it proposes to adopt, control over the use of the advertising as well as all other pages of the journal that is proposed to be established, and that said board report in full at the next meeting of this Association the plans upon which it has been able to agree, together with the response of the profession to its circulars asking active subscriptions to the proposed journal, and that the constitutional amendments prepared by Dr. Packard last year be continued upon the table until the report of the Board of Trustees is received and acted upon.

Resolved, That the Treasurer of the Association is hereby authorized to pay out of funds in the treasury the necessary expenses of the Board of Trustees in printing and distributing its circulars and in conducting its proper correspondence.

Resolved, That the Committee on Publication proceed to publish the transactions of the present meeting in a volume as heretofore, using all diligence to give it an early distribution to those entitled to receive it.

DR. FOSTER PRATT, of Michigan, chairman, then read the

REPORT OF THE COMMITTEE ON NOMINATIONS.

President, Dr. John L. Atlee, Lancaster, Pa.; *First Vice-President*, Dr. Eugene Grissom, of Raleigh, N. C.; *Second Vice-President*, Dr. A. J. Stone, of St. Paul, Minn.; *Third Vice-President*, Dr. J. A. Octerlony, of Louisville, Ky.; *Fourth Vice-President*, Dr. H. S. Orne, of Los Angelos, Cal.; *Treasurer*, Dr. R. J. Dunglison, of Philadelphia, Pa.; *Librarian*, C. H. A. Kleinschmidt, of Washington, D.C.

Judicial Council, to fill vacancies—Dr. N. S. Davis, of Ill.; Dr. J. M. Brown, U.S.N.; Dr. X. C. Scott, of O.; Dr. M. Sexton, of Ind.; Dr. N. C. Husted, of N. Y.; Dr. Wm. Lee, of Md.; Dr. J. E. Reeves, of West Virginia.

The next place of meeting—Cleveland, O.

Chairman of the Committee of Arrangements—Dr. X. C. Scott, of Cleveland, O.

Section in Practice of Medicine—J. H. Hollister, of Chicago, Chairman; John G. Lee, of Philadelphia, Secretary.

Section in Surgery and Anatomy—W. F. Peck, of Davenport, Iowa, Chairman; Paul F. Eve, Nashville, Tenn., Secretary.

Section in Obstetrics—John K. Bartlett, of Milwaukee, Wis., Chairman; G. A. Moses, of St. Louis, Mo., Secretary.

Section in Medical Jurisprudence and State Medicine—Foster Pratt, of Kalamazoo, Mich., Chairman; Thos. L. Neal, Dayton, O., Secretary.

Section in Ophthalmology, Otology, and Laryngology—A. W. Calhoun, Atlanta, Ga., Chairman; Carl Seiler, Philadelphia, Pa., Secretary.

Section in Diseases of Children—R. F. Blount, Wabash, Ind., Chairman; J. H. Sears, of Texas, Secretary.

Section in Dentistry—D. H. Goodwillie, of New York, Chairman; T. W. Brophy, of Chicago, Ill., Secretary.

Committee on Necrology—J. M. Toner, District of Columbia, Chairman; Wm. Thompson, Arkansas; J. H. Wooley, California; Chas. Dennison, Colorado; W. C. Burke, Connecticut; O. S. Pine, Dakota;

R. Battey, Georgia; J. H. Hollistor, Illinois; G. L. Sutton, Indiana; S. B. Chase, Iowa; C. V. Mottram, Kansas; J. G. Brooks, Kentucky; J. W. Dupree, Louisiana; A. Garcelon, Maine; Wm. Lee, Maryland; H. O. Marcy, Massachusetts; W. F. Breakey, Michigan; D. W. Hand, Minnesota; H. A. Gant, Mississippi; C. L. Hall, Missouri; R. C. Moore, Nebraska; J. A. Chapman, New York; B. A. Watson, New Jersey; C. W. Woolen, North Carolina; J. W. Russell, Ohio; Frank Woodbury, Pennsylvania; A. Ballou, Rhode Island; J. B. Lindsley, Tennessee; H. C. Ghent, Texas; O. F. Fassett, Vermont; F. D. Cunningham, Virginia; W. K. Curtis, West Virginia; J. T. Reeve, Wisconsin; G. Perrin, U. S. A.; F. M. Gunnell, U. S. N., and O. M. Miller, U. S. M. H. Service.

Committee on Publication—W. B. Atkinson, S. Cohen, J. H. Packard, R. J. Dunglison, A. Fricke, F. Woodbury, and J. V. Shoemaker.

Assistant Secretary—Dr. I. N. Hines, of Cleveland, O.

Committee on State Medicine—D. C. Ewing, Arkansas; J. C. Tucker, California; C. Dennison, Colorado; W. C. Wile, Connecticut; S. B. McGlumphy, Dakota; H. F. Campbell, Georgia; H. A. Johnson, Illinois; T. M. Stevens, Indiana; D. W. Crouse, Iowa; J. Bell, Kansas; T. B. Greenly, Kentucky; J. W. Dupree, Louisiana; F. B. Ferguson, Maine; Wm. Lee, Maryland; M. G. Parker, Massachusetts; R. C. Kedzie, Michigan; D. W. C. Patterson, District of Columbia; C. N. Hewett, Minnesota; H. A. Gant, Mississippi; E. W. Schauffler, Missouri; E. M. Whitten, Nebraska; J. A. Sanborn, New Hampshire; E. M. Moore, New York; D. C English, New Jersey; C. W. Wilson, North Carolina; J. Ransohoff, Ohio; A. H. Smith, Pennsylvania; J. N. Eldridge, South Carolina; V. S. Lindsley, Tennessee; W. H. Parker, Texas; S. W. Thayer, Vermont; F. D. Cunningham, Virginia; J. Frissell, West Virginia; J. T. Reeve, Wisconsin; W. C. Spencer, U. S. A.; A. L. Gihon, U. S. N.; O. M. Miller, U. S. M. H. Service.

Dr. Gihon, chairman of the Section on State Medicine, reported from the section the following resolutions:

MEDICAL EXPERT TESTIMONY.

Resolved, That, as the sense of the section of State Medicine of the American Medical Association, this Association deems it advisable and conducive to the ends of justice that medical men called as expert witnesses shall be subpœnaed directly by the court, instead of as now being called by either side of a suit in litigation.

The resolution gave rise to some discussion, and was finally laid upon the table.

NATIONAL MUSEUM OF HYGIENE.

Resolved, That the American Medical Association heartily indorses and commends to Congress the proposition of the Surgeon-General of the Navy to establish at Washington, in connection with the Bureau of Medicine and Surgery of the Navy and in co-operation with the American Public Health Association and the American Medical Association, a national museum of hygiene, which shall exhibit the history and progress of sanitary science by a collection of publications, articles, models, drawings, etc., illustrating defects and improvements in foods, in water supply, bedding, clothing, in marine architecture, house and hospital construction and furniture, apparatus for heating, illumination, ventilation and removal of excrete and refuse, culinary, laundry and bath facilities, and for physical culture and exercise, and whatever else tends to the preservation of health and the prevention of disease.

Resolved, That this Association earnestly urges upon Congress the appropriation of the sum of $10,000, which has been recommended, for the purchase of exhibits and their subsequent care and preservation, and that the permanent secretary shall without delay send a copy of these resolutions to each member of Congress. Adopted.

INDIAN SERVICE.

The Secretary read the following resolutions, which had been forwarded:

Resolved, That the constitution of the American Medical Association be so amended as to provide for the admission of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the surgeon-in-chief of the bureau and appointed by the Secretary of the Interior.

Resolved, also, That this resolution shall take immediate effect.

Being a proposed amendment to the constitution, they were laid over for one year.

ARMY MEDICAL MUSEUM AND LIBRARY

Dr. N. S. Davis, of Chicago, offered a series of resolutions expressive of deep regret at the attempt in Congress to reduce the appropriation for the Army Medical Museum and Library from $10,000 to $5,000, and earnestly urging that Congress will restore the appropriation to its former amount, in the interest of the medical profession and therefore of the community at large.

Unanimously adopted, and on motion the resolution will be printed and forwarded to every member of Congress and the heads of the Departments.

Dr. J. M. Toner presented the

REPORT ON NECROLOGY,

which was referred to the Committee on Publication.

List of the deceased members of the American Medical Association, sketches of whose lives appear in the report for 1882:

Axford, Samuel M., born, New Jersey, 1832; died, Flint, Michigan, December 10, 1873.

Bacon, John, died, Somerset, near Boston, Mass., November 28, 1881.

Barnett, James Richard, born, Fredericksburg, Va., 1832; died Vicksburg, Miss., May 10, 1879.

Barnum, Boliver, born, Cayuga County, N. Y., April 22, 1826; died suddenly at Schoharie, N. Y., November 1, 1881.

Beck, Joseph R., born, Lancaster, O., March 19, 1843; died, Fort Wayne, Ind., December 30, 1880.

Berney, James, born, Charleston, S. C., September 15, 1812; died, New York, July 10, 1880.

Bigelow, Jacob, born, Boston, February 27, 1787; died, Boston, January 10, 1879.

Blood, Soloman, born, Hollis, N. H., February 16, 1810; died, Owatonna, Minn., December 3, 1881.

Bower, Jeremiah H., born, New York, 1798; died, Lawrenceburg, Pa., August 1, 1866.

Brooke, Hugh W., born, Bleckesville, Va., January 5, 1830; died, Morgantown, W. Va., April 24, 1882.

Butler, Samuel Waswell, born in Franklin County, Me., February 22, 1816; died, Newport, R. I., April, 1881.

Cabanis, Alfred B., born, Huntsville, Ala., December 10, 1808; died, Hinds County, Miss., November 21, 1871.

Carter, Francis, born, Kingston, Ireland, 1814; died, Columbus, Ohio, February 26, 1881.

Catlin, Benj. H., born, Harwinton, Ct., August 10, 1801; died, Meriden, Ct., October 18, 1880.

Collins, Clarkson T., born, Chenango County, N. Y., January 8, 1821; died, Great Barrington, N. Y., April 10, 1881.

Corson, Thomas Johnson, born, Bucks County, Pa., February 12, 1828; died, Trenton, N. J., May 10, 1879.

Cullen, Thomas F., born, Philadelphia, Pa., September 3, 1822; died, Camden, N. J., November 2, 1877.

Cunningham, John A., born, Carterville, Va., October 3, 1803; died, Culpepper County, Va., March 21, 1881.

Dale, Edward F., born, September 19, 1831; died suddenly, Little Rock; aged about 40.

Davis, Charles W., born, Miami County, Ohio; died, Indianola, Iowa, July 20, 1881.

Deshler, Charles D., born, Northampton County, Pa., October 21, 1843; died, Hightstown, N. J., March 24, 1879.

Elliott, William N., born, Delaware County, N. Y., January 28, 1807; died, White Pigeon, Mich., April 31, 1881

Fisher, Alexander, born, Lancaster, Mass., August 12, 1804; died, Chicago, February 14, 1882.

Fisher, Daniel Shaw, born, Wales, Mass., November, 1820; died, Brookfield, Mass., April 29, 1878.

Foltz, Jonathan M., born, Lancaster, Pa., April 25, 1810; died, April 12, 1877.

Forre, Erasmus D., born, Newcastle, Ky., July 25, 1878; died, Louisville, Ky., May 26, 1882.

Gillett, Buckland, born, Schoharie, N. Y., September 18, 1807; died, Franklin County, Pa., October 19, 1881.

Gillette, Horatio C., born, Torringford, Conn., February 6, 1806; died, St. Charles, Ill., December 21, 1878.

Haggerty, Robert J., born, New Jersey, about 1822; died, Elkhart County, Michigan.

Harrington, J. F., born, Amite County, Miss., January 23, 1824; died, Jackson, Miss., March 23, 1874.

Henderson, Andrew A., born, Huntington County, Pa., February, 1816; died, April 14, 1875.

Hewitt, George W., born, Franklin County, Pa., December 23, 1830; died, 1881.

Howard, Edward L., born, Baltimore, Md., January, 1837; died, September, 1881,

Hughes, Joseph C., born, Washington County, Pa., April 1, 1821; died, Keokuk, Ia., August 10, 1881.

King, David, born, Newport, R. I., May 12, 1812; died, Newport, March 7, 1882.

Knight, Henry Martin, born, Connecticut, August 11, 1827; died, Florida, January 22, 1880.

Maddox, Thomas Clay, born, Farquier County, Va., February 10, 1836; killed, Odenton, Md., November 2, 1881.

Mendenhall, Nathan, born, Canton, Ind., October 31, 1831; died, Thornton, Boone County, Ind., August 18, 1880.

Miller, Erasmus Darwin, born, Franklin, Mass., August 7, 1813; died, Dorchester, Mass., July 5, 1881.

Monroe, Langdon O., born near Cincinnati, O., February 2, 1817; died, Cincinnati, O., June 15, 1878.

Norcum, William A. B., born, Edenton, N. C., May 13, 1836; died, Baltimore, Md., February 28, 1881.

Philips, John H., born, New Jersey, 1814; died, Beverly, N. J., March 1, 1878.

Read, Zachariah, born, Mount Holly, N. J., September 19, 1808; died, same place, July 25, 1879.

Register, Wilson Gray, born, Bath County, Va., February 16, 1845; died, Baltimore, Md., April 22, 1882.

Reynolds, Seward, born, Boston, Mass., 1793; died at his residence in Bostou, December 25, 1881.

Richardson, Samuel, born, Newton, Mass., January 13, 1795; died, Watertown, Mass., February 12, 1879.

Rogers, Thomas Cooper, born, Columbiana County, O., August 17, 1827; died, Harrington, Del., October 16, 1878.

Sackrider, Charles H., born, Oxford County, Canada; died, Mason, Michigan, November 8, 1881.

Skelton, Charles, born, Bucks County, Pa., April 19, 1806; died, Trenton, N. J., May 2, 1879.

Singleton, James Wm., born, Grant County, Ky., August 23, 1829; died, Paducah, September 26, 1881.

Smith, Samuel Price, born, Taneytown, Md., December 21, 1795; died, Cumberland, Md., March 2, 1882.

Stillman, Roswell Fogg, born, Cooperstown, N. Y., December 15, 1815; died, North Haven, Conn., December 21, 1879.

Taylor, John Winthrop, born, New York City, August 19, 1817; died, Boston, Mass., January 19, 1880.

Thomason, T. J., born, Philadelphia, 1833; died, Monmouth County, N. J., August 20, 1880.

Turner, William H., born, Mantua, N. J., November 18, 1844; died, Mantua, N. J., August 23, 1873.

Webster, Eliphalet K., born, Exeter, Mass., May 8, 1802; died, Pittsfield, N. H., November 9, 1881.

Wilcox, Lucian S., born, West Granby, Conn., July 17, 1826; died, Hartford, Conn., November 15, 1881.

Wood, Wm. Maxwell, born, Baltimore, Md., May 27, 1809; died, Baltimore County, Md., March 1, 1880.

Dr. N. S. Davis read the

REPORT OF THE COMMITTEE ON METEOROLOGICAL AND CLINICAL RECORDS.

In accordance with the action of the last annual meeting, stations of observation had been established at Boston, New York, Philadelphia, Baltimore, Charleston, New Orleans, Cincinnati, Pittsburgh, Chicago, St. Paul, Denver, and San Francisco. The committee secured the services of Prof. J. H. Long to prepare the material and supervise the work for determining the relative proportions of the ozone and other active oxidizing agents in the atmosphere in the several localities. Through the efforts of Prof. Long a number of eminent professional men of the country were secured to co-operate in the work, in which the United States signal service was also induced to co-operate, and to which the committee acknowledges itself under great obligations.

After reciting details of the work accomplished and its undoubted value to medical science, the report recommends its continuance, and that it may be made still more efficient, that Professor Long be engaged at a compensation of $500 to personally supervise the laboratory work during the coming year.

The recommendations of the committee were adopted.

REPORT FROM THE JUDICIAL COUNCIL.

The Judicial Council reported sustaining the protest of the Nebraska State Medical Society against

the admission of Joseph Meville, delegate from the Omaha Medical Society.

In the case of Dr. D. W. Day, delegate from Eau Claire Medical Society, the charges preferred were sustained, and he was declared to be no longer entitled to recognition as member of the Association.

In addition, it was recommended that the Eau Claire Medical Society be thoroughly reorganized.

The charges against S. P. Collings, of Hot Springs, Ark., were also sustained, and it was decided that he was not entitled to registration.

In the case of J. C. Cotton, who appealed from the Crawford County Medical Society, Pa., it was decided that there was no just cause for sustaining the appeal.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN SURGERY AND ANATOMY.

Dr. William A. Byrd, of Quincy, Ill., then delivered his address, in which he restricted himself to the consideration of "Excisions of the Intestinal Canal where Covered with Peritoneum." The paper was referred to the section, and an abstract with discussion can be seen in the proceedings of the Section on Surgery.

THE COMMITTEE TO NOMINATE A BOARD OF TRUSTEES FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

was announced as follows: L. A. Sayre, of New York; J. M. Toner, of Washington, D. C.; Foster Pratt, of Kalamazoo, Mich.; R. J. Dunglison, of Philadelphia; Robert Battey, of Rome, Ga.; W. F. Peck, of Davenport, Iowa; and H. O. Marcy, of Boston, Mass.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON STATE MEDICINE.

Dr. A. L. Gihon, of the U. S. Navy, gave a summary of the responses he had received to the request sent out in circulars for suggestions from physicians. To the first circular twelve, and to the second twenty-five answers were received. Dr. Gihon then entered upon an explanation of the indifference manifested concerning State Medicine by physicians, and paid his compliments to the profession and the people in terms redolent with sarcasm, and containing some humor and puff.

His proposed plan of working in this department was as follows:

First.—The collection of information and advice from the principal sanitary organizations and sanitarians of the United States as to the best plan for a national health organization, including the subject of quarantine, both maritime and inland, and the relations which should exist between State and local systems of quarantine and a national quarantine system.

Second.—The collection of information with regard to the sanitary condition of some of the principal cities and towns of the United States, with special sanitary surveys of the coast of New Jersey bordering on New York Harbor, Memphis, Tenn., etc.

Third.—The appointment of a commission to investigate yellow fever in the Island of Cuba.

Fourth.—The collation of the sanitary laws of the United States and of the several States, including not only the statutes but the decisions of the several courts on all questions involving the public health.

Fifth.—Investigations as to the best method of determining the amount and character of organic matter in the air; as to the effects of disinfectants and especially the composition and merits of patent disinfectants; as to the prevalence of adulterations in food and drugs; as to the diseases of food-producing animals; as to the flow of sewers in relation to their sizes and gradients; as to the influence of various soils upon sanitation, especially with regard to drainage and methods of disposal of excreta; as to the outbreak of diphtheria in northern Vermont, etc.

Sixth.—The suggestion of legislation to improve the sanitary condition of the mercantile marine.

The doctor forcibly argued in favor of a more stringent quarantine to prevent disease from being brought into the country. He then reviewed at some length the various State board of health organizations, showing their respective natures, scopes, and workings. Florida, Kansas, Maine, Missouri, Nebraska, Nevada, Ohio, Pennsylvania, and Vermont are the States without boards of health. The statistics supplied the National Board of Health came in for criticism, it being claimed that they did not properly show the true condition of affairs. The statistics of Washington as collected by the local authorities and given to the National Board were sharply contrasted with those secured by the Navy Department, the latter showing Washington to be far from the healthy city which has generally been supposed. The public buildings, though constructed without limit as to expense, are illy ventilated and, as a rule, breeders of illness.

The Section on State Medicine was advised that no work it could perform was so important as the securing of accurate health statistics. He concluded as follows:

"The people and their representatives must yet be educated to the real dangers to the public health, and this can best be done graphically by the simple diagrams of Pridgin Teale; by the meetings and popular addresses of the American Public Health Association; by the development of a great national museum and library of hygiene, which the Surgeon-General of the Navy has taken the initiative in establishing, in connection with the Bureau of Medicine and Surgery, and which it is proposed to make a central repository of whatever relates to sanitary science, and these accessible to every one throughout the land by the loan of books under proper guarantees of safety; and, lastly, by the American Medical Association, through its State Medicine Section, making physicians alive to their responsibilities as sanitary guides, encouraging the formation and development of State boards of health, and through them influencing the legislation of the country to the practical sanitary needs of this advanced age."

Dr. Campbell, of Georgia, took some exceptions to remarks made in the course of the address which seemed to him to reflect unjustly upon the American Medical Association, and defended the Association as one of the most efficient medical organizations in the world.

The address was referred to the Committee on Publication.

The Judicial Council reported back the resolution offered by Dr. Dennison in yesterday's session, and its consideration was postponed until Friday morning.

The Association then adjourned, to meet Friday, at 10 A.M.

Friday, June 9th—Fourth Day.

The Association was called to order at 10 A.M. by Dr. Hooper, Vice-President.

Prayer was offered by Rev. E. D. Neill.

The Chairman of the Committee of Arrangements,

Dr. A. J. Stone, made his report for the day, and at its close thanked the Association for the courtesy extended, the honor bestowed, and great gratification given in selecting St. Paul as the place for holding this annual meeting.

The report of the Librarian was read and referred to the Committee on Publication.

The report of the Treasurer showed a balance in the treasury of $1,141.38. The report was referred to the Committee on Publication.

The report of the Committee on Publication, Dr. A. Fricke, Chairman, was read and adopted, excepting so much as referred to the index for the "Transactions," which was ordered published at once.

RESOLUTIONS.

On resolution, offered by Dr. Keller, the secretaries of the different State medical societies were requested to send to the permanent secretary, annually, a corrected list of the membership of their respective societies.

Dr. Keller also offered the following, which was referred to the Committee on State Medicine:

Resolved, That in many of our large cities in the near future, if not now, Free Masonry will become a sanitary necessity.

Dr. A. L. Gihon offered the following, concerning

EXPERT MEDICAL TESTIMONY,

which was adopted:

Resolved, That it is the sense of the American Medical Association that it will be conducive to justice and to the dignity of the profession, if medical expert testimony can be presented to the courts without the appearance of bias or influence from either side of the case, and simply as a straightforward statement of scientific facts.

Dr. J. G. Thomas, of Savannah, Ga., offered the following, which gave rise to animated discussion, participated in by Drs. Davis, of Chicago; Garcelon, of Maine; Ransohoff, of Ohio; Gihon, of the Navy; Carpenter, of Kansas; and, on motion by Dr. Davis, its further consideration was indefinitely postponed:

Resolved, That the American Medical Association approves of the organization of faculties in medicine having no other function than the examination for degrees, as a measure which will increase the value of the present methods of education in medical colleges in this country.

ALLOPATHS.

Dr. C. Dennison, of Colorado, offered a resolution to the effect that no action of this Association, either in its code or in its proceedings at its annual meetings, should be considered as endorsing the view that the members are "Allopaths," or that there is any such thing as an allopathic physician.

It was supported by Dr. Sears, of Texas, and adopted by the Association.

The Committee on Nominations completed its report and the report was adopted. [See Thursday's proceedings.]

Dr. Eugene Grissom, Vice-President, Raleigh, N. C., moved that

AN HONORARIUM TO THE SECRETARY

of $1,000 be voted by the Association.

Dr. Toner, of Washington, moved to amend by making it $500.

The amendment was lost and the original motion was carried.

Dr. Toner gave notice of an amendment to the constitution to be acted upon next year, making the office of Secretary one to be filled annually by the Association.

Dr. J. B. Lawrence, of New York, offered a resolution instructing the President of the Association to appoint a committee, consisting of one representative from each State, whose duty it shall be to investigate the subject of the feasibility of creating and endowing such a medical institution as shall meet the demand of those who wish to investigate the progress, etc. Laid upon the table.

On motion, by Dr. H. O. Marcy, of Boston, a vote of thanks was extended to the Treasurer for his able services.

BOARD OF TRUSTEES FOR THE JOURNAL.

Dr. L. A. Sayre, chairman of the committee appointed to nominate a board of trustees, reported as follows: for trustees to serve *three* years, Drs. N. S. Davis, E. M. Moore, and J. M. Toner; to serve *two* years, H. F. Campbell, J. H. Packard, and L. Connor; to serve *one* year, P. O. Hooper, A. Garcelon, and L. S. McMurty.

The report was adopted.

The Secretary read the following resolution from the Section on Ophthalmology, Otology and Laryngology, and it was adopted:

Whereas, A petition has been presented to Congress asking for the calling of an International Commission to consider and agree upon some standard method of testing *visual acuteness and color-blindness*, and some requirements of these qualifications in the sailors of all countries; therefore be it

Resolved, That the American Medical Association heartily approves of the proposed International Commission, and hereby directs its secretary to transmit this vote to Congress.

Dr. Smith revived the amendment proposed by Dr Goodwillie concerning the giving to *permanent members the privilege to vote.*

Dr. Brodie, of Detroit, offered the customary resolution of thanks to the citizens of St. Paul, the Committee of Arrangements, the railroads which had granted favors, the citizens of Stillwater, and to all who had in any way contributed to the enjoyment of the members of the Association at its annual meeting of 1882. They were seconded by Dr. Davis, and unanimously adopted.

Dr. Foster Pratt, of Michigan, offered an amendment to the constitution to the effect that the law requiring the nominations for officers to be made *from those members present at the annual meeting*, shall apply only to the president, the vice-presidents, chairmen and secretaries of Sections, the assistant secretary, the chairman of the Committee of Arrangements, and the Judicial Council.

Dr. Davis offered the following resolution concerning the

ANNUAL MEETINGS,

which was adopted:

Resolved, That after the next annual meeting, the permanent interests and influence of this Association would be best promoted by again holding every second meeting in Washington, D. C., as the home of the Common National Congress, and not as the invited guests, and that each alternate meeting can be held in the section of the Union best intended to promote the interests of this Association.

Dr. Keller gave notice of an amendment which would permit the holding of the annual meeting as late as the first Tuesday in September, if desirable.

Dr. Sears, of Texas, offered an amendment making the Librarian a permanent officer.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON ORAL AND DENTAL SURGERY.

Dr. D. H. Goodwillie, of New York, spoke of the two divisions in this department of the healing art: 1st, dental art or prosthetic dentistry; 2d, oral surgery.

The first is nearly all of a mechanical nature, while the latter treated of all the diseases of the mouth.

He believed that the teaching of this specialty should be from established chairs in medical colleges, where all students, before graduating, should be examined on the principles and practice of this department. Besides, practical instruction should be given in an infirmary or hospital devoted to this class of affections. He gave illustrative cases from his personal experience of disease of the mouth and associate parts, such as interoral extirpation of the bones of the maxilla, with reproduction of bone and no deformity; internasal extirpation of bones of the nose; a new operation for closure of the hard palate and lip in early infancy; treatment of abscesses of the jaw and neighboring parts, etc. These cases were illustrated by diagrams, instruments, and over twenty models in wax.

He closed by saying that he hoped the time was not far distant when there would be endowed universities where every branch of the healing art and allied sciences would be theoretically and practically taught.

The address was referred to the Committee on Publication.

The Secretary announced as

DELEGATES TO THE BRITISH MEDICAL ASSOCIATION,

appointed by the President, Drs. T. Addis Emmet, Daniel Lewis, E. H. Brush, and W. M. Carpenter, of New York, and J. M. Da Costa, of Pennsylvania.

On motion, the thanks of the Association were extended to Vice-President Hooper, for the impartial and courteous manner in which he had presided over the Association.

Dr. Hooper appointed Dr. N. S. Davis to conduct the President elect, Dr. John L. Atlee, of Lancaster, Pa., to the platform, who was then introduced to the Association, and thanked the members for the honor which they had conferred upon him.

Dr. Hooper then expressed his thanks to the Association for the kindness and forbearance manifested towards him as its presiding officer, and the Association was declared adjourned, to meet in Cleveland, O., on the first Tuesday in June, 1883.

The whole number registered was 947.

SECTION IN SURGERY.

Dr. Wm. A. Byrd, of Illinois, Chairman.
Dr. Hugh McColl, of Michigan, Secretary.

TUESDAY, JUNE 6TH—FIRST DAY.

Dr. Carl Seiler, of Philadelphia, made some

REMARKS ON THE USES OF ELECTRICITY IN SURGERY.

The object was to call attention to some instrument designed to obviate some of the difficulties heretofore experienced in the use of electricity for surgical operations.

In his experience, the platinum knife of the galvano-cautery, in order to be serviceable, must have a fixed temperature varying according to the end desired. Having found that there was no battery which allowed of a fine graduation of the temperature of the knife, he had devised one which was so arranged that the plates were suspended above the liquid, and could be immersed by means of a treadle worked by the foot of the operator. The amount of zinc surface exposed to the action of the acid determines the amount of electrical current, and, consequently, the temperature of the platinum loop. In order to overcome polarization and continue the current for any length of time, he had introduced two cells containing the same number of elements, which could be immersed alternately by the treadle, thus always exposing a fresh surface to the action of the acid.

By substituting cells with partitions for each pair of plates, the battery can be used for the constant current, and for driving the electro-motor, such as used for running sewing machines, and, by attaching the hand-piece of the dental engine to it, he had found it far superior to the ordinary engine in use for removing bone or exostoses in the nasal cavities, as its speed can be regulated to a nicety; and if suspended from the ceiling and balanced by counter-weights, the hand is relieved of all weight, and is not affected by the movements of the foot working the treadle of the balance-wheel of the engine as ordinarily used.

Dr. Prince, of Illinois, had used for the more delicate operations the thermal cautery.

Dr. Seiler said that the thermal cautery could not be used in many cases; for example, in the treatment of certain conditions in connection with the turbinated bones, whereas the galvano-cautery knives could be made so delicate as to enable the operator to reach any point.

A paper by Dr. William Hill, of Bloomington, Ill., on

ABDOMINAL SECTION FOR THE RELIEF OF INTESTINAL OBSTRUCTION DUE TO INTUSSUSCEPTION,

was then read.

The author was not aware that this operation had been performed successfully prior to his case, August 23, 1855. The case was one of ileo-cæcal invagination occurring in an adult. The patient recovered.

Dr. Peck, of Iowa, referred to a case of intestinal obstruction occurring in a young man twenty-seven years of age, which did not yield to persistent injections of warm water, and finally abdominal section was performed. It was found that the appendix vermiformis had become adherent to the side of the vertebral column, and a loop of the ileum had been constricted under the band. He tied the appendix in two places, cleansed its cavity, and dropped it. The patient gave fair promise of recovery.

Dr. Halley, of Kansas City, referred to two cases. The autopsy in the first revealed constriction at the ileo-cæcal valve, with bony growth in the wall of the gut.

The second was a case of supposed intussusception occurring in a young man. Abdominal section was performed, when it was found that there was complete volvulus. The patient died. Notwithstanding the unfavorable termination of his cases, he believed that the operation was justifiable and that the best results would be obtained when it was performed early.

Dr. Field, of Iowa, thought that the constriction in Dr. Halley's first case was probably due to a malignant growth containing spiculæ of bone.

Dr. Lee, of Chicago, believed that the earlier the operation was performed the better would be the results obtained. But against that was the difficulty in diagnosis and the additional fact that recovery often ensued spontaneously in cases which were apparently hopeless without operative interference. In estimating the symptoms, too much reliance should not be placed upon the pulse and temperature, because in some of the gravest cases they were undisturbed.

Dr. Prince, of Illinois, thought it improper to operate until the symptoms became urgent. He recommended the use of Wales' bougie and the injection of warm water. The instrument by careful manipulation could be introduced to the distance of 18 or 20 inches or more. When this means failed, and the symptoms remained severe he would operate.

Dr. Parks, of Illinois, said there were three reasons why the operation was not more frequently performed.

First.—Hesitation, with reference to interfering with the peritoneum.

Second.—Difficulty in diagnosis.

Third.—Difficulty in determining the time when the operation should be performed.

With regard to the first there should be no hesitation. Concerning the second, the difficulties were sometimes very great. As to the third, previous to the sixth day, in cases of complete persistent obstruction, he had come to regard as the dangerous period.

In cases in which the obstruction was due to hardened feces, the best remedy, according to his experience, was opium.

Dr. Hill said that in his case he was fully satisfied concerning diagnosis. He was also convinced that if the operation could be performed sufficiently early many lives might be saved.

The Chairman thought that injections of water were useless in cases in which the obstruction did not exist in the colon, unless it was in those exceptional cases in which water could be forced beyond the ileo-cæcal valve.

Dr. Gay, of Buffalo, then read a paper on

ANCHYLOSIS OF THE HIP—STRAIGHT POSITION—ILLUSTRATIVE CASE.

After giving the differential diagnosis between true and false anchylosis, and referring to the means by which the diagnosis is made, the author passed to the consideration of the surgical methods of correcting the deformity, namely: subcutaneous osteotomy and fracture. Of these he regarded fracture as the most favorable, and the case reported was one in which that method had been practised. The result was not known, as the patient left the hospital, but the promise was very favorable at the time he passed from under observation.

Dr. Hill, of Illinois, had fractured the neck of the femur in a case of fibrous anchylosis due to hip-joint disease, and the result was redevelopment of the caries and subsequent excision of the joint. He thought, if the patient was able to get around and the deformity was not too great, the surgeon might better not interfere.

Dr. Prince, of Illinois, believed that a distinction should be made between the cases in which anchylosis was due to joint disease, and those in which it was due to false position, rheumatic influences, etc. In the latter cases surgical interference was justifiable. If, however, the anchylosis followed hip joint disease, extension and fracture were attended with great danger, and, therefore, the let-alone policy was the best, or at most, tenotomy with the view to releasing the contraction and correcting the position if possible.

Dr. C. T. Poore, of New York, thought it was not as safe to break up an anchylosed joint as it was to perform an osteotomy. He did not regard the latter as a dangerous operation, as there was no shock and suppuration seldom occurred. Again, after performing Adam's operation for fracture, the securing of motion was doubtful. Breaking up the hip-joint after joint disease was very much different from breaking up a fibrous anchylosis due to other causes; for the bones, especially in children, after hip-joint disease are in a diseased condition, and if the anchylosis is broken up the disease is very apt to return.

Dr. Owen, of Illinois, thought that the day for fracture of the femur, in cases of anchylosis, had passed, because the fracture could not be limited, and subcutaneous osteotomy could be limited exactly. After subcutaneous osteotomy there was no shock, and there was no reason why there should be. His experience applied to three cases of osteotomy at the neck of the femur. He recommended rest for two or three weeks, usually in the wire breeches, after the operation, and then passive motion with the view to establishing an artificial joint. The patient should be held under supervision for a considerable time.

Dr. Andrews, of Chicago, regarded subcutaneous osteotomy as a very important operation. He had not performed it but once above the neck of the femur. He had performed it in various parts of the body and had not seen shock follow the operation.

Dr. McCann, of Pennsylvania, recommended subcutaneous division of the resisting tendons and muscles and attempt to correct the position of the limb without division of the bone.

Dr. Lee, of Illinois, approved of osteotomy if the object was simply to correct deformity, because the shock was less than that after fracture and the operation could be definitely restricted. If an artificial joint was desirable, fracture would probably give the best result. To correct the deformity and at the same time give an artificial joint, complete excision was necessary.

Dr. Ransohoff, of Cincinnati, had performed twenty-five or thirty osteotomies, and had yet to see a single case in which the operation could be held accountable for bad results. He regarded it as very essential that the bone should be completely divided in order to prevent gangrene, etc. He thought it improper to discard osteotomy for the more hazardous operation of fracture. He had performed it several times upon rachitic tibiæ, and regarded the danger as only very slight.

Dr. Halley, of Kansas City, had performed subcutaneous osteotomy twice and with good results. There was no shock whatever. Section was made through the neck of the femur.

Dr. Gay, in closing the discussion, referred to the danger of fracture of the saw in performing osteotomy. When the position of the limb was between the straight and rectangular no operation was required.

The next paper was entitled

A NEW TRUSS TO BE APPLIED AFTER THE RADICAL CURE OF HERNIA,

by Jos. H. Warren, of Boston.

It contained an account of the operation by sub-

cutaneous injection into the hernial rings for the radical cure of hernia. For the after-treatment the ordinary trusses were absolutely injurious. From their material, shape, and constant pressure they defeated their own object. The truss exhibited consisted of a concave wire-ganze pad, with more gentle springs than usual. The pad is surrounded with a rim of tubing, and a bridge of tubing extended across to strengthen it. It was regarded as anatomical because it drew the pillars of the hernial rings together. A stiff spring defeated the object of the truss.

The subcutaneous operation was discussed by Drs. Prince and Andrews, of Ill.; Forbes and Phillips, of O.; and Tupper, of Mich. The operation was one practised fifty years ago by Dr. Pancoast, of Philadelphia, and while it contained some merit, it had been the subject of curious statements and presentations.

The Section then adjourned to meet on Wednesday, at 3 P. M.

Wednesday, June 7th—Second Day.

The Section was called to order by the Chairman at three o'clock.

A sub-committee, consisting of Drs. B. A. Watson, of N J.; Peck, of Iowa; and W. M. Carpenter, of New York, was appointed, to which all papers presented to the Section should be referred.

Dr. J. F. Stewart, of Peoria, Ill., presented

A splint for fracture of the elbow.

It was a wooden hinge-splint, with steel side-rod and adjusting screw, and was said to be applicable to all forms of fracture of this joint.

Dr. Geo. W. Nesbitt, of Sycamore, Illinois, then read a paper on

Ununited fracture of the femur treated by exercise.

It consisted essentially in the report of a case in which union failed to take place and was not secured until the limb was put up in a plaster of-Paris splint, and the patient compelled to walk without crutches, other methods, such as rubbing the ends of the bone together, drilling (twice), having prove l of no avail.

Dr. Keller, of Hot Springs, thought the case an exceedingly instructive one, because it illustrated the result liable to occur under improper treatment before it came under Dr. Nesbitt's observation. It was treated by means of ordinary side splints, and he thought that a much better dressing could not have been used if the desired result was an artificial joint. He believed most earnestly that no fracture of long bones could be properly treated except by means of a molded fixed dressing. He also thought that the heavy woolen blanket placed next the skin in Dr. Nesbitt's dressing was unnecessarily warm.

Dr. J. W. Carpenter, of Kansas, referred to a case of ununited fracture which was put up in a plaster of-Paris splint, the patient made to walk on the limb, and union followed. With reference to plaster-of Paris, one great reason why the profession was afraid of it was because they did not fully understand its proper application. When properly applied it was a safe and efficient dressing.

Dr. J. L. Atlee, of Pennsylvania, spoke of the advantage of placing woolen fabrics next the skin before applying the plaster bandages.

Dr. Garcelon, of Maine, referred to a case of fracture below the knee where union had not taken place at the end of ten or twelve weeks. The patient began suit for malpractice, and while hobbling about hunting up evidence he wore an extemporaneous stiff leather splint. When the case came to trial the limb was submitted for examination, and it was found that union was complete, and that it had been secured without deformity.

Dr. Pratt, of Stillwater, Minn., spoke of the femur of a deer which he had in his possession, and in which good union had occurred after fracture, while the animal was running wild.

Dr. Forbes, of Ohio, thought that the swelling should be allowed to subside before the application of the plaster-of-Paris, and also that in cases of compound fracture the wounds should be healed. He always placed flannel next the skin.

Dr. Flanner, of Michigan, had been accustomed to put on the leg of a pair of knit drawers in the case of fracture of the thigh, applying the plaster-of-Paris splint at once, and swinging the limb in a wire splint.

Dr. Keller advocated not to wait for swelling to occur, even if the case was one of compound fracture, before adjusting the fixed dressing. Of course he did not object to flannel, but merely thought that the article used by Dr. Nesbitt was unnecessarily thick for warm weather.

Dr. L. A. Sayre, of New York, advocated that the plaster-of-Paris splint should be applied at once, and without qualification, and he had not seen any case in which it had done harm when properly applied and properly watched. He had not seen any cases in which it had been necessary to remove the dressing on account of swelling when applied before swelling had occurred. It might be that in the next case it would be necessary to remove the dressing. He believed that the injury that had been seen from applying the plaster splint had been due to neglect in watching the limb properly. Woolen should be placed next the skin whether the weather was hot or cold.

Dr. Garcelon, of Maine, asked if Dr. Sayre was called to treat a case and was unable to reach the patient until eighteen or twenty-four hours had elapsed, and the limb had become swollen, whether or not he would apply the splint at once?

Dr. Sayre said that he certainly would wait until the swelling had subsided; but if the surgeon could reach his patient promptly, put the limb up in plaster *at once*.

Dr. Maclean, of Ann Arbor, Mich., asked Dr. Sayre if by means of the fixed dressing he had been able in every case to avoid non-union?

Dr. Sayre replied that in his own experience he had never had a case of non-union since he had used the permanent dressing. When the splint was properly applied the more the patient went about the better.

Dr. Maclean thought that an improper impression might go out from what had been said in the course of the discussion; for non-union may occur from causes over which the surgeon has no control whatever, and he thought that the Section should not put itself upon record that in every case of non-union the surgeon is responsible.

Dr. Sayre said that certainly he would not wish to be understood as making such a foolish assertion, because non-union might be the result under the very best treatment.

Dr. Maclean said that he had been censured by some of his brethren for giving an opinion in court,

on a hypothetical case, as follows: Suppose a fracture of the humerus was treated by the use of three short splints applied to the arm, and secured with tapes, the shoulder and elbow-joints being allowed free motion, would it be good surgery? His answer was that it would not. He wished Dr. Sayre's opinion upon such a case.

Dr. Sayre said he should regard it as a case of maltreatment.

The Section then adjourned.

Thursday, June 8th—Third Day.

The first paper was read by Dr. Jos. Ransohoff, of Cincinnati, Ohio, entitled

contribution to the surgery of the liver.

The first part contained the history of a case in which he had opened the abdominal cavity, opened the gall-bladder, and removed calculi. The patient died. The special point of interest was the accurate diagnosis, and the operation was performed with the expectation of finding a biliary calculus impacted. The wall of the gall-bladder was stitched to the abdominal wall before the bladder was opened. The incisions were made with the galvanocautery in order to avoid hemorrhage.

The second part contained the history of a case of *hepatic abscess*. Aspiration, repeated, gave no permanent benefit. The abdominal cavity was opened, the wall of the abscess stitched to the abdominal parietes, the sac opened, washed out by a constant stream of simple water running through the cavity for six, eight, or ten hours at a time, and several large sloughs removed by aid of a laryngoscopic mirror. A good result was finally obtained. With regard to the general plan of treatment, Dr. Ransohoff thought the evidence in favor of its practice was fast accumulating.

the proper points for incision in the drainage of suppurating knee-joints,

was the title of a paper read by Dr. Edmund Andrews, of Chicago.

Dr. Andrews gave a minute description of the anatomy of the knee-joint, and said there were three cavities: 1, the submuscular bursa; 2, the supra-patellar; and 3, the infra-patellar. Into these an incision was made upon each side and short drainage-tubes introduced from each direction. There were eight points of incision referred to in order to make the drainage complete; two, one on each side of the bursa; two, one on either side of the supra patellar expansion; two, one on each side near the posterior part of the joint; and two, one on either side of the ligamentum patella.

excisions of the intestinal canal where covered with peritoneum.

This paper was the address of the chairman of the section. After referring to the reported cases of excision of the pylorus, Dr. Byrd passed to the consideration of the treatment of those cases of strangulated hernia in which gangrene and an artificial anus had occurred. He gave the following conclusions upon the whole subject:

First.—Resections of the small intestine may be done to a considerable extent without interfering in any appreciable degree with digestion.

Second.—Practised under suitable conditions the operation is to be considered perfectly legitimate.

Third.—The resection may be performed by bringing the divided ends directly into apposition and closing the abdominal wound, by forming an artificial anus. The second and third procedure expose to less subsequent danger.

Fourth.—Resections of fibrous and cicatricial structure, which are probably more frequent than is generally supposed, may cause a radical cure, and the same is the case with epithelioma. On the contrary, resection of cancerous obstructions gives only temporary relief, and at a greater risk.

Fifth.—By proper diet after the operation the risk of fecal extravasation may be reduced to a minimum, and the best diet for this purpose is one containing as little fluid as possible.

Sixth.—By introducing liquids per anum, and drink in the same way, water is absorbed as by the mouth and there is no sense of thirst; the flow of intestinal fluids is less considerably and the patient is more comfortable.

The chief interest in the paper was concerning the treatment of cases of gangrene with strangulated hernia, and a proposed operation which was merely theoretical.

Dr. Ransohoff, of Cincinnati, regarded Dr. Byrd's method of treating artificial anus as an old one applied in a new way, and for an affection for which it was formerly never adopted. If he understood Dr. Byrd correctly, the operation was merely to loosen the cicatricial tissue and a portion of skin around the artificial anus, and turn it in so that the external surface becomes the internal surface, and over that he draws new skin. Such was a well-known method of operating for exstrophy of the bladder or for repair of the lower wall of the urethra, but he had not known of its being employed in artificial anus. Again, instead of bringing the entire circumference of the loops of the intestine outside, to unite in the course of time by inflammation, it was Dr. Byrd's purpose to cut obliquely through the intestinal wall, so that there would be no spur left at all, and in that manner he hoped to obviate the necessity for a subsequent operation for the cure of artificial anus. Dr. Ransohoff thought the operation an ingenious one; but there was one objection. It was a well-known fact that when two loops of intestine come out, they will protrude in such manner that the mesenteric surfaces would be in such relation to each other that the portion of intestine necessary to be ablated would be those surfaces which were nearest to the blood-supply for the portion of intestine remaining. Would not the removal of that portion of intestine which gives rise to the mesentery die in consequence of the removal of the source of blood-supply? The chairman's plan was theoretical, and so also was the objection.

Dr. Prewitt, of Missouri, supposed that the chairman would refer to the employment of laparotomy for the removal of a section of intestine, and was surprised to learn that he referred to strangulated hernia with gangrene of the bowel. With regard to the spur, Dr. Ransohoff had made a good point; and besides, there was another objection which he regarded as even more forcible in the majority of cases when artificial anus is formed. He believed it was not justifiable to perform the operation Dr. Byrd had suggested, because in the great majority of cases where artificial anus results from strangulated hernia, a conservative process had already been established in the way of throwing out inflammatory deposit, and the formation of protective adhesions, and the less the surgeon did after opening the sac and providing for the free escape of fecal

matter, the better. Nature had already provided the means of repair, and her work should not be interfered with, and when the surgeon disturbed the healthy portion of bowel within the abdominal cavity, he interfered with nature's conservative processes. Anything beyond mere opening of the sac he regarded as unjustifiable.

Dr. Garcelon, of Maine, asked: In cases of strangulated hernia which have been left until gangrene has occurred, and the surgeon cuts down and finds the intestine gangrenous, would Dr. Byrd dissect away the entire gangrenous portion, and dissect up the living tissue, or would he, under ordinary circumstances, allow the bowel to remain undisturbed?

Dr. Byrd replied that if the position of the opening and the condition of the gut was unfavorable, he would break up the adhesions, correct the position and complete the operation as he had described.

Dr. Ellis, of Michigan, referred to the

SPONTANEOUS CURE OF ARTIFICIAL ANUS

as bearing upon the question of surgical interference. He referred to a case in which sloughing occurred with removal of a mass nearly as large as his fist. Two openings were left. A light dressing was applied, the parts were kept clean as possible, and within a few weeks the opening closed spontaneously, and a complete cure was effected.

Dr. Vaughan, of Missouri, referred to three cases of spontaneous cure of artificial anus formed by sloughing in strangulated hernia. In all the cases the recovery was complete within three months.

Dr. Norred, of Illinois, as an offset, mentioned a case in which the artificial anus remained, and Dr. Martin, of Iowa, spoke of a case of artificial anus, the result of a gunshot wound received in the left side of the abdomen, and in which only a pin-hole opening remained, and for the closure of this he performed a plastic operation, but it failed.

Dr. Allen, of Pennsylvania, thought that spontaneous closure with cure of artificial anus occurred more frequently than was usually supposed. He referred to a case in which the opening remained patent for two months, but at the end of three or four months the artificial anus had closed, and natural movements from the bowels took place. He would not, however, on any account abstain from attempting to aid nature by surgical interference in proper cases.

Dr. E. M. Moore, of Rochester, N. Y., remarked that the Chairman's address was interesting as showing the advance going on with regard to abdominal surgery, but the real question for consideration was just this: in cases of strangulated hernia where gangrene has occurred, is it better to let the parts alone, and have an artificial anus as nature has determined, or should we interfere with that process and proceed to pass into the cavity of the abdomen, and draw the parts down or raise them up for the purpose of having a more convenient place for an artificial anus? To be sure under Poupart's ligament is an inconvenient position for such an opening, but it is also true that when gangrene occurs the patient usually dies from septicæmia. On opening the large pouch, relief comes to the patient, and even if the opening is quite small the contents can escape, and nature may go on and throw out deposit which will seal the parts against invasion of the peritoneal cavity and so protect the patient from immediate danger. He thought it unwise practice, as a rule, merely for the purpose of getting a better place for an artificial anus, to resort to the surgical interference indicated by the Chairman. And against the proposed plan he wished to enter a little protest. The cases of spontaneous cure when left to nature are sufficiently numerous not to require further comment. But it is also true that artificial anus remains in many cases. Dr. Moore then referred to one of his cases in which he waited four or five months for spontaneous recovery to take place, but it did not occur and he employed Dupuytren's instrument and succeeded in effecting a complete and radical cure. Such was the practice of the old surgeons, and he was not prepared to undertake anything which would expose the patient to additional risks. Certainly he did not intend that his patients should die of peritonitis induced by interference.

The Section then adjourned.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

H. O. Marcy, of Boston, Mass., Chairman.
C. V. Mottram, of Lawrence, Kansas, Secretary.

TUESDAY, JUNE 6TH—FIRST DAY.

Dr. Wm. H. Granger, of East Boston, Mass., read a paper on

THE MECHANICAL TREATMENT OF DELIVERY FROM THE SUPERIOR STRAIT—MODES OF APPLICATION OF THE FORCE APPLIED — ILLUSTRATED BY THE USE OF A MODIFIED FORM OF THE FORCEPS.

The form of forceps introduced was a modification of Elliott's forceps, consisting of an extra handle attached upon the anterior surface just above the usual handles, and by means of which pressure could be made in the posterior direction, thus enabling the accoucheur to make traction in the axis of the superior strait.

Dr. Nelson, of Chicago, thought favorably of the modification, or at least regarded it as important to relieve the bladder as much as possible from pressure and at the same time to make careful traction in the axis of the strait. He thought Dr. Granger's instrument would be less likely to give rise to vesico-vaginal fistula than the ordinary forceps.

Dr. G——, of Washington, thought the principle good, but that it could be applied as well without as with the attachment.

Dr. Stapler, of Minnesota, wished to know if by adopting the method too much pressure would not be made upon the sacral nerves.

Dr. Granger said that injury came not so much from brief severe pressure as from long continued pressure upon the nerves and other tissues.

Dr. Dunster, of Ann Arbor, regarded it as very important that every movement should be accurately in the direction of the axes of the straits, and regarded the modification of the forceps as a useful one. The accidents and injuries sometimes occurring in connection with parturition, such as the formation of fistulæ of various kinds, were not, as a rule, so much due to the use of instruments as to prolonged pressure from the head of the child. Rupture of the perineum was caused not so much by forceps as by attempt to force the head through the passages before proper dilatation had occurred.

Dr. Nesbitt, of Sycamore, Illinois, believed that the profession was too well educated to make traction in the indirect direction, and that knowing in what direction traction should be made, the attachment was of no special assistance.

Dr. W. C. Burke, Jr., of South Norwalk, Conn.,

saw a case only a few days ago in which the perineum was ruptured by an instrumental delivery made by an intelligent physician.

Dr. Morris, of Ironton, Ohio, thought that the perineum might be ruptured with or without forceps, and no one be to blame.

Dr. R. Beverly Cole, of San Francisco, introduced

A NEW FORCEPS,

and spoke concerning the instrument and its use. He was totally opposed to having the heel of the instrument conical, for when an attempt was made to use leverage with such an instrument, it was almost certain to slip off; but when there was a wider space between the edges of each blade, the head would bury itself more completely in the blades of the forceps, and the liability to slip be greatly reduced. In the construction of his instrument he held in view the fact that every man who attempted to use forceps should be old enough and sufficiently educated to understand the anatomy of the parts and the mechanism of labor. His instrument has a wider space between the blades, especially at the heel, and is more circular at the junction of the handles than those commonly in use. It also had an attachment similar to that presented by Dr. Granger, except it was to the under instead of the upper surface, but he thought his own invention was not worth five cents. Dr. Cole commented at length on the views held by different authors, the instruments devised, and the methods recommended for the delivery of the child.

Dr. McClelland, of Philadelphia, regarded Dr. Cole's suggestion concerning the shank of the forceps as very valuable. He thought that the obstetrician could get much aid by using the left hand upon the upper side of the handles of any forceps, and the forefinger passing forward and resting upon the head of the child.

Dr. Battey, of Rome, Ga., said that in either surgery or obstetrics the human hand represented the most perfect of all instruments, and should never be superseded by the attachment of any instrument when it could be employed unaided. In using the forceps only gentle traction should be made; force should never be employed. The more instruments were complicated the greater was the detraction from their utility.

The Section then adjourned.

Wednesday, June 7th—Second Day.

Dr. D. T. Nelson, of Chicago, read a paper on

SUBINVOLUTION OF THE UTERUS, ITS CAUSES, EFFECTS, AND TREATMENT.

He attributed very many uterine, and often general disturbances to incomplete involution, and argued that through the entire puerperal period the uterus should be daily examined digitally by a competent accoucheur. He also favored securing firm uterine contraction by some means, as it prevented subinvolution, septicæmia, etc. He also recommended the use by injection of warm water, containing carbolic acid one-half to one per cent., and the internal use of quinine, both of which favored the occurrence of involution. No parturient woman should leave the bed until involution is complete.

Dr. K. S. Ellis, of Michigan, asked for experience in operating on lacerations immediately after delivery.

The general sentiment seemed to be in favor of the immediate operation in the majority of cases, especially if the circular artery or any of its branches are involved.

Drs. Chapman, of New York, Prince, of Illinois, and Campbell, of Georgia, recommended the daily use of quinine for a week after confinement, especially in malarial districts. The paper was further discussed by Drs. Ross, of Pennsylvania, and Hall, of Missouri.

Dr. L. H. Robbins, of Lincoln, Neb., reported

A CASE OF DELIVERY OF A CHILD OF ENORMOUS SIZE AND WEIGHT.

The child weighed seventeen and one-half pounds, and was well formed.

Dr. Battey, of Georgia, spoke at some length on the

PROGRESS IN OOPHORECTOMY,

as illustrated by the fact that Lawson Tait, Spencer Wells, and English and German surgeons were rapidly increasing the number of operations. In deciding whether or not it should be adopted, each case must be studied by itself. As a rule, he would prefer to remove the ovaries through the abdominal rather than the vaginal incision.

In this connection, Dr. Battey referred to several eminent operators who have ceased to employ Listerism.

Dr. Cole, of San Francisco, regarded Listerism as dead and a fallacy. The discussion that occurred at the International Congress in London, 1881, was reviewed at some length and the position taken that Mr. Lister admitted every allegation against the method known by his name. Dr. Cole was not an opponent to antiseptic surgery, but did not believe that any man could say that one wound was septic and another aseptic.

All good surgery was antiseptic, because *cleanliness* was at its foundation. He doubted the existence of any germicide which could be used of sufficient strength to kill the germs and yet be safe for the patient.

Dr. Prince, of Illinois, did not receive the same impression from the discussion at the International Congress as did Dr. Cole. He did not believe that any man could cultivate germs in a solution of carbolic acid of the strength of one thousand per cent., while water, which had been boiled, and which Dr. Cole recommended, would not destroy them.

The brilliant success sometimes obtained without the use of any antiseptic measures whatever, did not in any way explain the remaining cases where antiseptics have been so beneficial.

Dr Cole continued by reading extensively from Mr. Lister's remarks in support of the position he held concerning the method of dressing.

The Chairman defended Listerism. He knew Mr. Lister to be right in certain directions and believed that Dr. Cole was correct in others.

He defined an aseptic wound as a simple fracture and a septic wound as a compound fracture; that is, in a septic wound there is something from *without* which enters and changes its character.

The Section then adjourned.

Thursday, June 8th—Third Day.

AN ELASTIC SERRATED UTERINE SCOOP AND CURETTE,

devised by Dr. Jos. H. Warren, of Boston, was exhibited. It was designed to be used in the removal of uterine tumors.

Dr. Prince, of Jacksonville, Ill., exhibited an instrument by means of which

THE SEWING-MACHINE STITCH

could be made, and regarded it as especially adapted to operations for recto and vesico vaginal fistulæ.

Dr. Dunster, of Ann Arbor, then read a paper on

OVARIOTOMY DURING PERITONITIS—IS IT JUSTIFIABLE?

The author believed that the operation should unhesitatingly be performed in the following classes of cases:

First.—Peritonitis resulting from rupture of a cyst, with discharge of its contents into the peritoneal cavity.

Second.—Peritonitis following tapping or aspiration.

Third.—Peritonitis with marked effusion.

The doubtful cases belonged to that class in which there was a low grade of irritative inflammation incident to the presence of the tumor.

Dr. Battey, of Georgia, and Dr. Jenks, of Chicago, referred to cases which had been operated upon while peritonitis was present, and recovery took place.

A paper on

IMPACTED RETROVERSION OF THE UTERUS

was read by Dr. H. F. Campbell, of Georgia, in which special attention was directed to the assistance offered by placing the patient in the genu-pectoral position while replacing the organ.

In this connection a paper by Dr. W. W. Potter, of Buffalo, N. Y., on

THE GYNESIC VALUE OF THE GENU-PECTORAL POSTURE,

was read and the two gave rise to discussion, which was participated in by Drs. Dunster, of Ann Arbor, Nelson, of Chicago, and others.

Dr. H. L. Gertz, of Marshalltown, Ill., read a paper entitled

A FEW PRACTICAL POINTS ON RUPTURED PERINEUM.

The points were that all cases can be treated successfully—except where the sphincter is involved—by position and without sutures. Movements from the bowels should be secured before placing the patient in position, and after that no passage should be allowed for four or five days. Keep the wound clean and keep away from it every foreign body.

Dr. Gertz also exhibited a

UTERINE REPOSITOR.

It consisted of a flexible bougie into which was introduced a steel stylet with a disc on the end. The method of use was to introduce the largest bougie the uterine canal would admit, allow it to remain a few minutes, remove it, and introduce another, and so on until a No. 10 or 12 American could be introduced, and then the stylet was used, pushed on until resistance was encountered, then pushed carefully, and finally it would go into the entire length of the canal, where it may be allowed to remain a few minutes and then removed.

Dr. H. F. Campbell thought the method obviated the danger arising from the use of the stem-pessary, a straight, stiff, or slightly curved stem, which was liable to wound the mucous membrane of the delicate organ and at once establish traumatism.

The Section then adjourned.

MEDICAL SOCIETY OF NEW JERSEY.

One Hundred and Sixteenth Annual Meeting, held in Asbury Park, May 23 and 24, 1882.

TUESDAY, MAY 23D—FIRST DAY.

The society met in Educational Hall, at Asbury Park, at 4 o'clock, P.M., and was called to order by the President, Dr. L. W. Oakley, of Elizabeth.

Prayer was offered by the Rev. B. C. Lippincott, of Asbury Park.

The attendance of members was about the usual number. Every district, excepting Atlantic and Salem, was represented.

A cordial welcome was extended to the Society by Dr. S. H. Hunt, Chairman of the Committee of Arrangements, and by Mr. James A. Bradley, of Asbury Park.

Dr. Amos B. Pann, a delegate from the Medical Society of Massachusetts was present, and was cordially invited to sit with the society during its session, and to take part in its deliberations.

The following resolution, presented by Dr. T. R. Varick, was adopted:

Resolved, That the Medical Society of New Jersey reaffirms its allegiance to the Code of Ethics of the American Medical Association, and views with distrust any effort on the part of legally constituted societies to deviate from or antagonize its provisions.

PREVENTION OF EPIDEMICS.

Dr. D. C. English read a paper on the "Prevention and Limitation of Epidemics."

The means recommended by the Doctor are general education of the masses in sanitary science through the public schools, general and State legislation, and the enforcing of quarantine. As the general Government is somewhat handicapped in its efforts toward sanitary reform by the State rights doctrines of many of the States—the greatest benefit must be expected from State legislation.

The good effected by an efficient State Board of Health is seen in our own State. As another means of limiting epidemics, the schools should be quarantined against children from infected houses.

In our own State there has been a great deal of sanitary legislation directed toward this subject; and so far as this is concerned, we are well protected. It remains to increase the general knowledge in these matters, so that reform measures may be received cheerfully.

The medical profession have it in their power to create such a public opinion. They are more active in this matter than in former years, and it is their duty to impress upon the public mind the need of proper drainage, pure drinking water, isolation of the sick, vaccination, private funerals, etc. In this way the cause of epidemics may be destroyed and their course limited.

Dr. E.M. Hunt, delegate to the International Medical Congress, and Dr. I. L. Bodin, delegate to the Medical Society of Massachusetts, read their reports, which were, on motion, referred to the Committee on Publication.

A letter was read from Dr. Forman announcing the death of Dr. John Wright, of Freehold. Drs. Woolverton, Phillips, Neal, English, Weeks, and Dunham were appointed a committee to attend his funeral.

The President announced the following committees:

Nominating Committee—S. S. Clark, Chairman; D.

A. Currie, L. Jamieson, H. G. Taylor, J. S. Whitaker, T. A. Van Wagenen, G. C. Laws, W. P. Watson, M. Abel, H. M. Weeks, D. C. English, J. S. Long, J. G. Ryerson, P. A. Harris, L. D. Tompkins, J. Miller, H. H. James.

Committee on Treasurer's Accounts—J. E. Arrowsmith, H. A. P. Neal, and H. H. James.

Adjourned, to meet this evening at eight o'clock.

EVENING SESSION—EIGHT O'CLOCK, P.M.

The society assembled. The President in the chair. Communications from the district medical societies of Mercer, Hudson, and Camden were received and referred to Committee on Ethics.

ANNUAL ADDRESS OF THE PRESIDENT.

After a few remarks acknowledging the honor conferred upon him, and eulogizing his predecessor, THE PRESIDENT announced as his subject,

MEDICAL EDUCATION.

The needs of higher requirements for graduation, and of better preparation for entrance upon the study of medicine, were urged, and the responsibility of the present condition and of the remedy were placed upon the profession at large; upon them was imposed the duty of forcing our medical colleges to take a higher standard, to lengthen their courses of lectures, and to adopt a graded system. The establishment of a system of State licenses was recommended as a cure for the evils of the unregulated small medical college.

The effort made last year to establish examining committees in each county, who should examine would-be medical students prior to their entering upon their studies, was spoken of and recommended to be carried out, and the plan put in operation, in order that hereafter the student of medicine should be generally as well educated as he is specially.

The thanks of the society were voted to the President for his able and instructive address, and a copy requested for publication in the "Transactions."

REPORT OF THE STANDING COMMITTEE.

The Standing Committee's report is one of the special features of the society's proceedings, giving, as it does, a picture of the general health of the State during the year. The report is an epitomé of the several reports of the county reporters.

A review of the year shows a general increase all over the State of malarial diseases, often taking the form of typho-malarial; these diseases have been ascribed to the drought of the last summer and to the low condition of the streams and ponds, and to the condition of the drinking supply. In Bergen County there was reported an epidemic of intestinal disorders traced to cows' milk, it being considered that the irritating condition of the milk was due to the shrubs and weeds that formed the feed of the cows.

Typhoid fever was noticed as prevalent in Burlington, Camden, Mercer, Middlesex, Ocean, and Warren counties.

Small-pox was present in Hudson, Essex, and Mercer counties, but not to any great extent.

Diphtheria and scarlet fever were noticed as more prevalent than usual throughout the northern part of the State. The scarlet fever is reported of mild type, but the diphtheria was generally malignant.

In the City of Camden a peculiar epidemic of catarrh was reported, affecting all the mucous membranes—a disease which seemed self-limited, and with no mortality.

INTERESTING CASES.

DR. HUNT, of Metuchen, reports several cases of diphtheria, which have a bearing on the length of the period of incubation, which was shown to be in these cases five days.

DR. SNOWDEN reported cases where the disease appeared within a week of the introduction of the poison.

DR. LARISON reports marked improvement in a case of diabetes, where opium, in one-half grain doses, was used three times daily.

DR. GROSS, of Camden County, reports a case of hydated disease of the uterus.

The following essays were read by title:

Dr. Welch, "Treatment of Uterine Hemorrhage;" Dr. St. John, "Diagnosis of Infantile Diseases;" Dr. Currie, "How to Choose a Wet Nurse." A circular was issued by the Standing Committee requesting information regarding the working of the new medical law. A decrease in the number of irregular practitioners is noted, but no convictions have as yet occurred under the new law.

The formation of a society for the relief of the widows and orphans of the medical men of New Jersey is noted.

NECROLOGY.

The following members of the society have died during the year: Dr. F. Wilmarth, of Essex, aged forty-one years; Dr. S. D. Marcy, of Cape May, aged eighty-nine years; Dr. C. T. Morrogh, of Middlesex, aged sixty-one years; Dr. H. S. Clew, of Middlesex, aged fifty-seven years; Dr. H. S. Harris, of Warren, aged eighty-six years; Dr. T. P. Dickerson, of Salem, aged sixty years; Dr. T. H. Studdiford, of Hunterdon.

DR. I. S. BODIN read a report upon the comparative value of humanized and bovine vaccine virus.

DR. P. C. BURKE, Third Vice-President, read a paper entitled the "Vaccination Question." Both papers elicited much discussion. The sentiment of those who took a part in the discussion seemed to be nearly equally divided in regard to the comparative merits of humanized and bovine virus. All felt that the commercial bovine was very unreliable.

The Corresponding Secretary read his report.

Adjourned until nine o'clock Wednesday.

WEDNESDAY, MAY 24TH—SECOND DAY.

The President in the chair.

DR. THOMAS RYERSON, on behalf of the Fellows of this society, read

THE SOCIETY'S PRIZE.

DR. OAKLEY having suggested to the Fellows the propriety of offering a prize annually for the best essay on a given subject, that body met during a recess, adopted the suggestion, and appointed Thomas Ryerson, S. H. Pennington, and E. M. Hall to prepare a plan, and report to the society at its present session.

The following plan was accordingly presented to and unanimously adopted by the society:

The Fellows of the Medical Society of New Jersey, present at Asbury Park, during the meeting there of the society, hereby propose that the society should offer, annually (or at least triennially), a prize of one hundred dollars to the members of the several district societies of the State, for the best essay on some selected subject connected with medical science or art; and that they will deposit

annually (or at least triennially), with the society's treasurer, the funds necessary for that purpose.

The method of competition for, and of awarding that prize shall be as follows:

A committee of three shall be annually constituted, to be called the *Fellows' Prize Committee.* The retiring president of the society shall, *ex officio*, be its chairman, a Fellow selected by his associates shall be the second member, and the third shall be a member of a district society (not a Fellow of the State society), selected annually by this society's Nominating Committee.

At the session of this society when this committee shall be constituted, it shall select and announce to the society, and promptly thereafter to each district society, a subject for the competition of the ensuing year. And during its year of office the committee shall adjudicate upon the essays which shall have been handed in to its prospective chairman (then the president of the State society) not less than two months before the session when it was constituted.

Each essay shall be signed under an assumed name, and have a motto, both which shall be endorsed upon a sealed envelope, containing the author's real name, with his address and district society; and none of these envelopes shall be opened by the committee until after its award, and then only those bearing the names and mottos appended to the successful essays.

The committee shall select the first two essays in order of merit, reference being had, not only to the subject matter, but to the language and style of the author. To the first essay shall be awarded the prize of one hundred dollars, to the second that of "honorable mention." They shall give to the president of the society the names of the authors of these essays, with their assumed names and mottos, and notify these authors to be present at the next annual meeting to receive their award. The president shall, during that session, announce these names, assumed names, and mottos, and before the whole society, with some appropriate ceremony, make the awards. The unsuccessful authors having identified their essays, shall receive them back from the chairman, but the successful essays shall be the property of the society, and be published in its "Transactions."

No award shall be made unless the essays shall be decidedly meritorious, and in that case the money shall remain in the treasury until it can be thus properly awarded.

The Fellows have themselves this year selected the following subject for competition: "The Importance of Exploration of the Urine, both Chemical and Microscopic, as an Aid to Practice; and the Relation of Hæmaturia to Diseased Processes."

The committee of award for the essays (to be handed in two months before the next annual meeting) is L. W. Oakley, of Elizabeth, chairman *ex-officio*; Henry R. Baldwin, of New Brunswick; and James S. Green, of Elizabeth.

ORDER OF BUSINESS FOR NEXT YEAR.

Dr. H. H. Baldwin, chairman of Business Committee, reported as follows:

The Committee on Business would recommend the following modification of the report of last year regarding the order of business:

Tuesday, 4 o'clock P.M.—Prayer; report of Committee on Organization; report of Committee on Arrangements; reading minutes of last annual meeting; report of Committee on Business; report of delegates to corresponding societies; report of Committee on Ethics, and Judicial Business; announcement of committees by the president. 7.30 o'clock: President's address; report of Standing Committee (five minutes allowed each member for remarks upon the same); report of Corresponding Secretary; report of Committee on Unfinished Business; half hour allowed for discussion upon some subject suggested at previous meeting.

Wednesday, 9 o'clock A.M.—Report of Committee on Treasurer's Accounts; receiving and acting upon applications for degree of M.D.; report of Committee on Honorary Members and Honorary Degree of M.D.; reception of delegates from corresponding societies; investigation of by-laws and receipt of communications from district societies; essay by third vice-president; reading of such papers as are approved by the Business Committee (the committee approved of a paper presented by Dr. C. J. Kipp on "Traumatic Rupture of Drum of Ear," and recommended that it be read at this meeting); recess from one to three o'clock. Three o'clock P.M.: Continuation of previous order; report of Nominating Committee; election of officers; miscellaneous business; adjournment.

The report was adopted.

The degree of Doctor of Medicine was conferred upon Charles A. G. Schuhl, of Jersey City, and Vincent Nager, of Newark.

An interesting and instructive paper on

NERVE-STRETCHING,

was read by Dr. W. J. Chandler, of Essex.

The writer gave a general review of the whole subject, beginning with a brief historical sketch of the operation, detailing more fully the anatomical lesions and physiological experiments bearing on the subject, discussing at length statistics as to the results of the operation in neuralgias, spasmodic affections, tetanus, locomotor ataxia, etc., and finally comparing the general (medical) opinion with the testimony of statistics. Appended to the paper were the histories of a number of unpublished cases, and a tabular list of three hundred and twenty cases, giving name of operator, disease, date of operation, results, and remarks on each case.

The anatomical and experimental divisions were a *résumé* of French and German researches down to the present time, and conclude as follows:

First.—The important lesions are, a loosening of the nerve from the sheath, extravasation of blood in the sheath, dilatation of the blood-vessels, rupture of only a portion of the nerve-fibres, and occasionally nutritive changes.

Second.—Stretching acts especially to interrupt the sensitive current, but allows the motor current to pass.

Third.—That the motor current and reflexes are more affected by centrepetal than by centrifugal traction.

Fourth.—That stretching acts on the nerve-centres, producing certain dynamic changes, and occasionally local disturbances more or less persistent.

Statistics of 320 cases contain of sciatica, 57 cases, 52 cured (91 per cent.); neuralgia of 5th pair, 27 cases, 12 cured (48 per cent.); traumatic neuralgia, 16 cases, 12 cured or greatly improved (75 per cent.); all other neuralgias, 33 cases, 22 cured or greatly improved (66 per cent.); mimic spasm, 13 cases, 11 cured (85 per cent.); torticollis, 10 cases, 6 cured (60 per cent).

In four of these exsection was combined with stretching: Traumatic tetanus, 49 cases, 10 recovered (20 per cent.); locomotor ataxia, 49 cases, 16 greatly improved (32 per cent.).

In many cases of peripheral paralysis, epilepsy with an aura, and anæsthetic leprosy, there has been a decided and very persistent improvement.

The recent discussion of the Berlin Medical Society and the unfavorable impression it has created were considered, and the conclusion arrived at that Dr. Westphal's unfortunate experience was negative testimony, which was more than balanced by equally good testimony, from competent observers in other parts of the world. Nussbaum's "intercostal case" is not claimed as a cure (as Westphal stated), but as a failure. In regard to Langenbeck's "patient with seven operations," he (Chandler) says: "We may not commend the wisdom of seven operations on one patient, but they attest a firmness of *conviction* as the outgrowth of *successful experience*, which ridicule vainly assails." Finally, reminded of the opposition encountered by other operations (ovariotomy, etc.), he gives as his own conclusion: "While it (nerve stretching) may not accomplish all that its most ardent advocates claim for it; while, too, there is much to be learned aa to particular modifications of the operation, and as to its adaptability to different forms of disease, we feel confident that an operation which develops so much statistical strength, has enough of real merit to outlive opposition, and take its place among accredited surgical operations."

Dr. Ill, of Newark, read an analysis of

FORTY-FOUR CASES OF LACERATION OF THE CERVIX.

The doctor operates without an anæsthetic, and uses antiseptic precautions. Of these cases thirty-nine were entirely cured, the other cases did not unite and are waiting a second operation. Thirty-seven cases were entirely relieved of the symptoms induced by the laceration.

Of the special symptoms due to the lesion, the writer noticed particularly the loss of sexual appetite, this symptom was ascertained to exist in thirty-four cases, of these twenty-seven were cured by the operation.

One patient who afterward was delivered at full term, presented herself with a new laceration, posterior to the cicatrix of the operation.

The writer speaks of "the lesion as the most interesting, and the operation and the cure of which belongs to the most thankful in the whole line of uterine surgery."

TRAUMATIC RUPTURE OF THE DRUM MEMBRANE

was the title of a paper read by Dr. Kipp.

Twenty-five cases were reported. The causes were blows upon the ear or the mastoid process, puncture by sharp-pointed bodies, falls upon the head. The symptoms were great pain in the ear, tinnitus, impairment of hearing, slight hemorrhage from the ear, a broad dry perforation, noise on forcibly blowing the nose. Where the lesion was caused by a fall, there was also present unconciousness, vomiting, long continued vertigo, and absolute loss of hearing. The rupture was usually posterior.

The treatment was simple—the cold air was excluded by cotton in the meatus. With this treatment fifty per cent. recovered without inflammation. The only case where instillation was practiced had a suppurative aulitis media.

Dr. George Bayles, of Essex, was appointed Essayist for the next meeting.

The following was adopted

CONCERNING FREEDOM IN CONSULTATIONS.

Resolved, That the delegates from this society to the American Medical Association be instructed to resist any effort to alter the code of ethics in such manner as to authorize members of the profession, or any medical society in affiliation with this association to encourage or permit its members to hold professional intercourse with men who repudiate the scientific principles of medical practice recognized by this said association.

OFFICERS ELECTED.

President—J. W. Snowden; *First Vice-President*—S. Wickes; *Second Vice-President*—P. C. Barker; *Third Vice-President*—Joseph Parrish; *Corresponding Secretary*—Wm. Elmer, Jr.; *Recording Secretary*—Wm. Pierson, Jr.; *Treasurer*—W. W. L. Phillips; *Standing Committee*—C. J. Kipp, S. S. Clark, and E. J. Marsh.

Atlantic City was agreed upon as the place for the next annual meeting. It was voted that the annual assessment for the next year should be one dollar and a half per capita.

The following committees were appointed:

The Business Committee the same as last year.

The Committee on Honorary Membership the same as last year.

The Committee to elaborate a plan for the putting into effect the suggestion of the president in his address in regard to the curriculum of medical study: Drs. Pennington, Rogers, and Elmer.

Committee to investigate where and of whom good, reliable, and pure vaccine virus may be obtained: K. H. James, L. Halsey, W. Rankin, S. A. Currie, and N. C. Clark.

Committee of Arrangements for next meeting: H. G. Taylor, J. W. Snowden, and Franklin Gauntt.

The amendments to by-laws changing order of business so as to be in accord with the order recommended by Business Committtee, and the time of meeting from the "fourth" Tuesday in May to second Tuesday in June were adopted.

Adjourned *sine die*.

The Kola Nut.—The properties of the kola nut, which is largely used in Central and Western Africa, have been lately elucidated by MM. Heckel and Schlegdenhauffen, who, in a paper to the French Academy, gave an analysis of the substance. The cotyledons of the seed are the only part the negroes use. The effects are those of a stimulant and tonic; and impure water is rendered agreeable by previous use of the nut. The analysis shows that the kola nut has more caffeine than the best coffees, and that that substance is wholly free, not combined, as in coffee, with an organic acid. The action of the caffeine is aided by a considerable quantity of theobromine present. Next there is a notable amount of glucose, of which there is none in cocoa. The nut contains twice as much starch as is found in seeds of the theobroma. There is little fatty matter, and a special tannin, together with a red coloring matter, is present. As a remedy, the kola nut is appreciated by the Africans in affections of the intestines, liver, etc.; it may be ranked medically with cocoa and like matters, over which, however, it has an advantage in possessing so much tannin, which gives it astringent properties.

Correspondence.

THE AMERICAN MEDICAL ASSOCIATION AND THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

To the Editor of The Medical Record.

Dear Sir: We have just closed a memorable session of the American Medical Association and one in which our profession in the State of New York has a special interest. The delegates from that State were refused admission on the technical ground that its code, recently revised and adopted, is not in harmony with that of the American Medical Association. No opportunity was afforded the delegates from the New York State Society to contend for the right of place in the association, the question having been summarily disposed of before the register was opened by the action of the Judicial Council. The animus was made obvious by the clerk throwing back the certificate to the first delegate from the New York State Society who was audacious enough to present it. The partisan spirit was still more strongly manifested when the same official with breathless haste and gusto read some protests from such medical societies as had seen fit to forward them against the New York code. It was the conspicuous intention to stamp the action of the New York State Society with a mal-odorous stigma. There were one or two who took special pleasure in seeing this brand applied, and in that number one of our townsmen was pre-eminent, applauding with robust vigor whenever the victim was imagined to be in pain. Indeed he expressed his regret privately, that he had not been able to have the delegates from New York put to the rack or their thumbs tortured in the thumb-screws by the inquisitors of the old code.

While this spirit played in sulphurous clouds on the surface, it was easily ascertained that a considerable body of the members thoroughly sympathized at heart with the New York movement, and would rejoice to see the profession left for its ethics to the common code which binds decent people generally.

These quiet men who believe in free thought and free conscience will speak and act when the time comes, and the present leaders of the Medical Association shall have given place to men who believe that the public are to be protected against medical ignorance by the more rapid diffusion of truth and its embodiment and expression in form of State and national laws and the curricula of medical schools.

As an illustration of the benefit of treating the question of the relations of medical practice to the public interests, in a broad philosophical way, I may say that the law of Illinois, compelling medical registration, has driven out of that State over two thousand irregular practitioners, most of whom have settled in Iowa, though some have gone as far as Arkansas and other States and territories. Iowa and other States will be compelled immediately to pass similar or better laws. The irregular must keep his carpet-bag hereafter very near at hand, as he is soon, in this land, everywhere to be kept on the tramp. Legislation would progress more quickly and be less defective if the crusade against ignorance could be carried on upon the basis of letting into the army all who have legal qualifications. The exigencies of the fight against ignorance would make the soldiers better, giving to them an *esprit de corps*, and quickly reacting on medical schools and public opinion till there would be less temptation to wander away upon the bogs of medical *isms*, because the profits of the trade would not compensate for the peril. With all that we may do quacks will exist, and in the very citadel of our profession and decorated sometimes with the insignia of high office. But when men become more and more severe in criticising themselves and less expert in eviscerating the moral characters of their neighbors, they will have more tone, more vigor, and more moral fitness to discharge, with humility and faithful reliance, the congenial and ennobling work of benefactors. Let the New York State Society and its affiliated societies stand firm, and in less than five years the profession in the United States will have all its energy turned in the direction of the great field of personal, domestic, and State sanitation, and questions of ethics will be left to the police.

Ever faithfully yours,

Viator.

New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 4, 1882, to June 10, 1882.

Magruder, D. L., Major and Surgeon, Medical Director, Dept. of the Missouri. Granted leave of absence for one month. S. O. 110, Dept. of the Missouri, June 1, 1882.

Taylor, M. E., Capt. and Asst. Surgeon. Now awaiting orders at St. Louis, Mo., to report in person to the Superintendent Mounted Recruiting Service, for temporary duty at the Cavalry Depot, Jefferson Barracks, Missouri. S. O. 126, A. G. O., June 1, 1882.

Tesson, L. S., Capt. and Asst. Surgeon. Relieved from duty at the Cavalry Depot, Jefferson Barracks, Missouri, and to proceed on July 1, 1882, to San Antonio, Tex., and report in person to the Commanding General, Dept. of Texas, for assignment to duty. S. O. 126, C. S., A. G. O.

Gray, William W., First Lieut. and Asst. Surgeon, Fort Townsend, W. T. Granted leave of absence for one month, to take effect the 3d proximo. S. O. 67, Dept. of the Columbia, May 24, 1882.

The Prognosis of Nasal Catarrh.—Dr. Rumbold, discussing this question, says (*St. Louis Medical Journal*):—"To recapitulate: Up to the tenth year all patients will recover upon the observance of hygienic laws and with constitutional and medical treatment of the simplest kind. Those from about twelve to twenty years of age will require more thorough treatment, but every uncomplicated case can be cured in time. A little less than a majority of those patients from about the twenty-fifth to the thirty-fifth year can, by close attention to *all* the hygienic laws and careful non-irritating medical treatment, be cured, while the great majority of this class and all who are older, because of the permanency of the inflammatory action, and because of complication of other important organs, can be benefited only, and even this beneficial treatment must be made at each change of the season during life."

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 10, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever
June 3, 1882.	5	6	114	7	126	52	6	0
June 10, 1882.	14	6	94	5	80	47	17	0

THE ANNUAL MEETING OF THE ASSOCIATION OF AMERICAN INSANE ASYLUM SUPERINTENDENTS was held at Cincinnati, O., May 30, 31, June 1 and 2, 1882. Thirty-seven members were present. The meeting was singularly barren of scientific work, but was very pleasant and successful socially. Only six papers were read during the four days. These were by Dr. C. H. Hughes, of St. Louis, on "A Case of Moral Insanity;" by Dr. Bucke, of Ontario, on "The Growth of the Intellect;" Dr. W. H. Hurd, of Pontiac, Mich., on "Treatment of Periodic Insanity;" Dr. R. P. Dewey on the "Differentiation and Segregation of Certain Classes of Insane;" by Dr. Rogers on "Certain Heretofore Unobserved Effects of Alkaloid Cinchonia;" by Dr. Fisher, of Boston, on "Guiteau." The question of Guiteau's insanity was not discussed. The association visited the asylums in and near Cincinnati. Dr. John A. Callender was elected president. The association will meet next year at Newport, R. I.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—At the annual meeting held in St. Paul, Minn., June 5, 1882, the following members registered: Dr. N. S. Davis, *Chicago Medical Journal and Examiner;* Dr. Wm. Brodie, *Therapeutic Gazette*, Detroit, Mich.; Dr. J. A. Octerlony, *Louisville Medical Herald;* Dr. J. V. Shoemaker, *Medical Bulletin*, Philadelphia, Pa.; Dr. Thomas N. Reynolds, *Detroit Clinic;* Dr. H. O. Marcy, *Anatomical and Surgical Annals*, Brooklyn, N. Y.; Dr. F. Woodbury, *Boston Medical and Surgical Journal;* Dr. Thomas J. Gallaher, *Pittsburgh Medical Journal;* Dr. W. B. Atkinson, *Medical Register*, Philadelphia, Pa.; Dr. L. Connor, *Detroit Lancet;* Dr. W. M. Carpenter, MEDICAL RECORD, New York; Dr. Thomas M. McIlvaine, *Peoria Medical Monthly*, Ill.; Dr. W. C. Wile and Dr. William C. Burke, Jr., *New England Medical Monthly;* and Dr. John C. Lee, of Philadelphia, Pa. In the absence of the president and secretary, Dr. N. S. Davis was elected president pro tem., and Dr. W. M. Carpenter secretary pro tem. An interchange of views was then made concerning advertisements in medical journals, the desirability and practicability of publishing the Transactions of the American Medical Association in journal form, and the propriety of adjourning *sine die*. The absence of the president, Dr. Edwards, of Richmond, and of the secretary, Dr. Reynolds, of Louisville, and their neglect to furnish either address or records of the organization, were facts unpleasantly accepted. The president pro tem. appointed, as Committee on Nominations, Drs. Octerlony, Brodie, and Marcy, and the following report was offered:

For President—Dr. N. S. Davis, of Chicago.

For Vice-President—Dr. W. M. Carpenter, of New York.

For Secretary—Dr. J. V. Shoemaker, of Philadelphia.

The report was accepted, and the officers duly elected. A motion to adjourn *sine die* was lost. The secretary was authorized to make such arrangements for the time and place of holding the next annual meeting as he should regard the best which can be done for promoting the interests of the association. The association then adjourned.

NOT ETHICAL.—The Georgia State Medical Association, at its last meeting, expelled Dr. D. O. C. Heery for advertising a specialty.

ILL, SKILL, BILL.—

Canto First.

Will
Fill:
Ill.

Canto Second.

Skill;
Pill:
Nil!
Ill
Still.
Hill.*

Canto Third.

Bill.

S. W. FRANCIS.

* Grave.

DR. T. G. THOMAS has been reappointed Clinical Professor of Diseases of Women in the College of Physicians and Surgeons, New York.

TREATMENT FOR FRACTURE OF THE CLAVICLE.—Dr. W. B. Bradner, of Warwick, N. Y., writes:

"Believing that the list of clavicle-mending fixtures is not yet full, I will describe a method which, for all that I know, is mine; which at all events has given me great satisfaction. I place the hand of the injured side upon the sound clavicle and fix it there firmly by adhesive straps. I then elevate the elbow (keeping it pressed snugly to the chest) until the shoulder goes 'upward, backward, and outward.' I then support the elbow in its position by a sling, and secure the sling from slipping by adhesive straps in lieu of tapes, the straps being applied to the skin of the back, sufficiently abundant to prevent all slipping or change of the position of the sling. The arm, forearm, and clavicles thus form an isosceles triangle, and when the elbow is raised the angle formed by the arm and forearm is widened, and the direction of the arm carries the shoulder to the desired position. Its ease of application, its comparative security from shifting, together with being as nearly comfortable as anything can be to a broken clavicle, added to the fact that the resulting deformity is next to nothing, induce me to submit it to the test of the profession."

A HERMAPHRODITE HOG.—The *Nashville Journal of Medicine and Surgery* reports a case of, as it claims, genuine hermaphroditism, in a hog. The specimen was brought to the notice of the Secretary of the Savannah State Board of Health, and was carefully examined by Dr. J. E. Dobson. It consisted of a

uterus having attached at one end an ovary, and at the other a well-developed testicle. Or rather the uterus, which in a hog is bifid, had only one end, while the other was an undeveloped scrotum. The testicle was perfect in all its appointments, having a spermatic cord and the usual folds attached. The outward appearance of the hog was that of a female, though the clitoris was evidently an imperfect penis, and the doctor had frequently noticed emissions of semen. Unfortunately for the cause of science the doctor failed to preserve all the attachments. It would have been peculiarly interesting to have noted the attachments of the spermatic cord, and it would have been well to have preserved all the genital organs. This is much to be regretted, as the clear case of a hermaphrodite is almost unknown. This is the best authenticated case we know of. It is evidently a commingling of the sexes in one being, as the uterus is only half developed, and there was but one ovary and one testicle. The hog had the habits of a male more than that of a female, though it was both one and the other. The specimen, in alcohol, was presented by Dr. Clark to the museum of the University of Nashville and Vanderbilt University.

A New Comparison of Poisons.—Comparative experiments with different poisons have often been made by injecting a given quantity of each into the veins of animals, and noting the effects. M. Richet has recently tried another method (which offers some advantages), viz., poisoning the medium in which the animal breathes. If a fish be put in a poisonous solution, it dies sooner or later, according to the concentration of the poison. M. Richet adopts as the "limit of toxicity" the maximum quantity of poison (referred to one litre of water) allowing a fish to live more than forty-eight hours. This limit he has determined for various metals, always using the same radical acid, viz., chlorides. The limit of toxicity was calculated, not per weight of chloride, but per weight of combined metal. The figures show that there is no precise relation between the atomic weight of a substance and its poisonous power. Copper is 600 times as poisonous as strontium, though its atomic weight is less. Lithium, with an atomic weight only the twentieth of that of barium, is three times as poisonous, etc. Even with metals of the same family, no relation between the two things was discoverable. Cadmium (112) is only about half as poisonous as zinc (65); lithium (17) is 70 times as poisonous as sodium (23), etc. Nor could any relation be made out between the chemical function of a body and its toxical power. Thus potassium and sodium, the chemical properties of which are so similar, have very unequal toxicity; one gramme of potassium is nearly 250 times as poisonous as one gramme of sodium. M. Richet means to prosecute the subject further.

Female Physicians in India.—The London *Spectator* discusses the prospects of success for medical women in India: "Miss or Mrs. Sarah Heckford writes to the *Times* to say that, although without a diploma, she practised medicine for two years in India, and doubts whether there is a remunerative field for female doctors. They are greatly wanted, but she thinks the natives, though most ready to receive them, are unwilling to pay heavy fees for services to their women, and says that even in midwifery cases they will give a large honorarium if the child is a boy, and nothing at all if it is a girl. The last remark is probably true, native feeling on that matter being as incurable as that of the old Jews; but we do not believe the general argument. Natives are rich and, like all other human beings, will pay for what they value; and they value their women. That it may be needful to claim fees in advance is possible, as they have a notion that medical attendance is a work of merit, which repays itself; and we have no doubt that a government appointment, even without salary, would be an assistance to the first female doctors. There are thousands of women in India with property of their own."

Measurement of Drugs.—A correspondent of the *Lancet and Clinic* makes the following correction of the table of ratio between bulk and weight given in Holmes' "Surgery." The weight of a teaspoonful of medicine as given in Holmes:

	Actual weight.
Tannin ..... ʒ i.	ʒ i.
Zinc acetate..... ʒ iss.	ʒ i.
Alum..... ʒ ii.	ʒ i.
Zinc sulph..... ʒ iss.	ʒ ii.
Plumb. acetate..... ʒ iii.	ʒ iss.

The Value of Genuine Koumiss.—Dr. Carrick, in his work on Koumiss, explains why the results obtained from its use are so often unsatisfactory. Koumiss is, according to Dr. Carrick, the specific against consumption. But "unfortunately would-be drinkers of real koumiss have to solve the same difficulty that Mohammed had with regard to the mountain. They are obliged to go to it; and this, because only of mares' milk, and that only of mares fed on steppe grasses, is it possible to make koumiss. Cows' milk is too rich; so is even the milk of European mares; in fact, the best milk makes the worst koumiss. The comparatively large quantity of fat in cows' milk is fatal, as it favors butyrous and interferes with vinous fermentation. According to an analysis which Dr. Carrick gives us, the proportions of nitrogenous matters and fixed salts in 1,000 parts of mares' milk, women's milk, and cows' milk, are as 21, 22, 43; of fat, 14, 29, 38; and of milk-sugar, 57, 64, 45. It will be thus seen that mares' milk more nearly approaches to women's milk, and when transformed by fermentation into koumiss is even more easily and rapidly digested than the human secretion. It is this which enables Tartars and others to drink the enormous quantities of koumiss which they are accustomed to take. At the koumiss establishments, eighteen bottles a day is no unusual dietary, and no sort of inconvenience, immediate or future, is experienced from it."

The Late James R. Wood, M.D., LL.D.—At the stated meeting of the New York Pathological Society held May 24, 1882, the following resolutions were reported and unanimously adopted:

Resolved, That in the death of Professor James R. Wood, one of the founders of the New York Pathological Society, this society has lost one of its most devoted members, and one whose life and character have rendered him one of its brightest ornaments.

That his devotion to, and success in, the cultivation of our particular branch of medical science gave him a foremost place in our councils, our confidence, and our esteem. We deplore his loss as of one who warmly sympathized with us in our labors, and who, by his kindly, genial, and earnest nature, won our regard, while his life career challenged our admiration and respect.

Resolved, That his memory as our associate and

friend will always be gratefully cherished by the members of this society.

T. M. Markoe,
Austin Flint,
Lewis A. Sayre.

A Case of Splenic Leucocythæmia.—Dr. George T. Welch, of Keyport, N. J., communicates the following: "Leucocythæmia is, fortunately, so rare a disease, and its treatment, unfortunately, in the chronic stages at least, so invariably unsuccessful, that I feel it a duty to offer the following notes as a farther contribution to the study of this intractable malady.

"November 8, 1881, I was called to see Mrs T. Foley, of Matawan, aged forty-six, whom I found to be suffering from chronic invalidism induced by some grave disorder which did not readily discover itself to my inquiries. I was much struck with the waxen pallor of Mrs. Foley's countenance, the lips being bloodless, the conjunctivæ pearly white, and even the tongue had lost its ruddy hue.

"The chief symptom complained of was frequently recurring attacks of hemorrhage from the bowels, which had persisted in spite of even heroic measures addressed to its relief. In the train of this, followed the usual disorders of anæmia, dyspnœa, vertigo, loss of appetite, disturbance of the functions of digestion, and slightly elevated temperature. Physical exploration discovered subacute bronchitis, with marked dulness over the apex of the left lung; the pulse was unduly frequent, and anæmic murmurs were heard about the heart; the spleen was found to be enormously enlarged, extending into the iliac fossa and beyond the median line. It could be, by slow persistence, caught over the hooked fingers and lifted up and down like a detached plate of armor, to the great admiration of the patient and her daughters, one of whom successfully carried out the same experiment. The anterior notch of the spleen could be distinctly felt in exaggerated form, as well as two or three other indentations. As near as I could approximately measure the organ, being guided by its outlines and dulness on percussion, it was eleven inches in length, and though Gowers has recorded five cases ranging from sixteen to nineteen inches, I could not feel impatient, judging from the size of the abdomen here, that there was not much more room for development. Deep pressure gave a gurgling sensation under the hand, which was noticeable to the patient. I drew some blood from the finger, which I preserved for microscopical study. It had a pale chocolate color, and under the microscope showed an astonishing diminution of the red corpuscles, and a corresponding increase in the number of the white. At first it seemed to me the white corpuscles predominated two to one, but employing the method of Vierordt, after frequent numeration, I found there was one white to three red corpuscles. The white corpuscles were larger than usual, and the red had little of the ensanguined hue.

"Under treatment of electricity, tonics of iron and quinine, and maltine with peptones, the red corpuscles were increased in quantity and density of color; so much so that a specimen of blood examined early in January, 1882, had a decided red appearance, and the percentage of red corpuscles had been largely increased. But even at this time the rarity of the latter and predominance of the white corpuscles was considered extremely remarkable by Dr. Hodgson, who examined some of the blood sent to him on a slide. These encouraging symptoms, however, did not continue, and after February 1st, the red corpuscles were again reduced, and continued uniformly to disappear until the end.

"I began the use of electricity to the spleen on the 8th of November, the positive pole being applied posteriorly over the tenth rib, and the negative frequently shifted over the tumor in front. As strong a current as the patient could conveniently bear was employed almost daily for several weeks. Under its action, the spleen, after its first application, was reduced at least half an inch, and at the end of four weeks it had receded three inches, and finally was permanently reduced five inches. At the end of twelve weeks this organ no longer preserved its firmness of structure as at first, but was soft and of a doughy consistence, and deeper pressure was necessary to discover its outlines. Hemorrhage from the bowels, which had been such a persistent feature, ceased almost entirely until within a fortnight of death, when they again began, and became more and more difficult to control. As a matter of experiment the use of electricity was sometimes discontinued, when the hemorrhages invariably returned in about forty-eight hours, and ceased on the reapplication of the battery.

"Pyrexia, being a noticeable symptom, the temperature was carefully noted from time to time, and once, during fourteen days, it was taken three times. When I was not able to see the patient the record was continued by the oldest daughter, a very capable young woman. It was found to range from 94° in the morning, to 100° at night. Quinine had no effect in controlling the pyrexia, but atropia had. One sixtieth of a grain of the sulphate of atropia given early in the day, would shortly increase the temperature two degrees and maintain it for several hours; the higher temperature of 100° not being reached in the evening, the disease seeming powerless, after the action of the stimulus was withdrawn, to goad the natural heat of the body to a higher altitude. No permanent good effect was produced, however, the remedy being discontinued, on account of its soporific qualities, and dryness of the throat with increased bronchial difficulty that supervened.

"The dyspeptic symptoms improved under the use of maltine with peptones, and the body began to be better nourished, the appetite returning and the spirits of the patient wonderfully improving under the apparently favorable treatment. But, as a dragon, momentarily confounded by the shepherd and his dogs, soon picks up courage and steadfastly withdraws to his den with his ill-gotten prey, so did the leucocythæmia again begin its downward course, and this time not to be held in bonds any more. After the first of February the circulation began a more rapid march, ascites was developed, together with œdema of the feet and legs, in a less marked degree, while a hypostatic congestion of both lungs occurred, which, with the bronchitis, now developed into a catarrhal form, very much simulated phthisis. The hemorrhages from the bowels recommenced, the appetite was lost, the mental faculties grew apathetic, and, finally, death occurred on the 31st of March, nine months after the supposed inception of the disease.

"On account of the surreptitious use of patent medicines, and the laxity of the attendants in complying with my directions toward the last, I severed my connection with the case on March 19th, and thus reluctantly lost the opportunity of making a post-mortem examination of the remains."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

PUBLISHED BY

WM. WOOD & CO., Nos. 56 and 58 Lafayette Place, N. Y.

New York, June 24, 1882.

THE ANTIPYRETIC TREATMENT OF FEVERS.

In a review of the treatment of typhoid fever, which we made a short time ago, it was asserted that the claims of the antipyretic method of treating fevers were much less enthusiastically advocated than formerly.

We venture to say that in this country the routine use of vigorous antipyretic measures has as yet failed to be justified by any clinical results. This method, as applied in modern times, originated in Germany, and was developed by Brandt, Jürgensen, Liebermeister, and others. It was soon introduced into this country, and has been used here extensively.

The original recommendation for its employment was based upon the theory that heat is the essential symptom of fever, or at least the chief morbific agent to be contended against. This view was supported practically by large numbers of statistics from the German hospitals. It was affirmed by Glenard, in 1874, that among six to eight thousand cases of typhoid fever treated by the use of cold, there was an average mortality of between 4.5 and 7.6 per cent. The mortality by the old method was from 18 to 25 per cent.

Much can be said against the theory that heat is the essential factor in a specific fever. The arguments in favor of it have been most admirably discussed by Dr. H. C. Wood. We cannot consider, however, that his well-known experiments of heating animals entirely proves his point. He found that heat produced and withdrawal of heat relieved febrile symptoms. His temperatures were very high, however. In a specific fever, also, there is a constant and increased production of heat at the very time it is being withdrawn by baths, a condition not carried out in Wood's experiments. With the high fever of phthisis, furthermore, there may be few severe symptoms and but slight granular changes. After heat abstraction in typhoid, the symptoms may be but little changed. Cold baths abstract heat, but at the same time increase its production for a time. In order to lessen this production, the baths, we are told, must be frequently repeated. But now come some of the advocates of cold bathing and recommend its use in a moderate degree.

The figures given regarding the clinical value of cold bathing in German hospitals, are certainly very convincing. We cannot, however, be too careful in applying German hospital statistics to ordinary practice in America. The same statistics showed the great value of antipyretics in pneumonia. But the use of cold baths in the treatment of pneumonia in this city, at least, has been disastrous. We can find no clinical evidence to prove that the antipyretic treatment has decreased the mortality here in typhoid fever, the disease where it is most often indicated. Dr. Flint speaks of its value guardedly. Dr. Palmer, in his recent work, has little to say of it. Dr. Bartholow commends it, but gives no statistics. Some of the best English clinicians also speak against the routine practice.

Statistics of the application of this method in Bellevue Hospital, published in THE RECORD four years ago, showed that it had failed to secure any decrease of mortality there. Many authorities might be cited in England and France against the antipyretic method as formulated by the Germans.

We would not be misunderstood regarding the question. The use of antipyretic measures in typhoid fever, scarlatina, rheumatic fever, etc., is undoubtedly at times of the greatest importance. Every physician can probably recall certain individual cases where it has been of the highest service. But that heat is always the great thing to fight against in a specific fever, that antipyretic measures (cold and quinine) should be looked upon as the routine and necessary practice in continued pyrexia —this has not been proved true for America.

Cold continuously used is a depressing and sometimes dangerous agent. Quinine in very large doses is not without its evils. These two measures should be used, therefore, with the greatest judiciousness by medical men.

OUR CITY INSANE ASYLUMS.

THE Grand Jury recently paid a visit to Ward's and Blackwell's Islands. They spent six hours looking over the institutions in those places, and write of their experiences with much *naïveté*. Of the New York City Asylum for the Insane they say: This asylum was visited with great satisfaction. The building is not excelled in excellence of appointments by any other in the world! It contains 1,260 inmates. The appearance of the Female Lunatic Asylum on Blackwell's Island, which contains 1,389 inmates, was also "truly gratifying."

It is the singular dulness of such men as these, who think that because the floors are clean the insane are well provided for, which makes progress in the care of this class so difficult. Our city asylums are, no doubt, well managed with the means supplied. But the best medical care for the acute insane, and the most economical and humane provision for the chronic cases, are very far from being obtained. In fact it is impossible to expect anything else so long as these institutions are under purely political control.

American Medical Association.

THIRTY-THIRD ANNUAL MEETING.

Held at St. Paul, Minn., June 6, 7, 8, and 9, 1882.

SECTION IN MEDICINE.

Dr. J. A. Octerlony, of Louisville, Chairman.
Dr. Thomas N. Reynolds, of Detroit, Secretary.

TUESDAY, JUNE 6TH—FIRST DAY.

The first paper was by Dr. J. Hilgard Tyndale, of New York, and entitled

SYSTEMATIC AND ANTISEPTIC GERMICIDAL HOME TREATMENT OF PULMONARY CONSUMPTION.

Dr. John V. Shoemaker, of Philadelphia, then read a paper on

THE THERAPEUTIC ACTION OF POTASSIUM CHLORATE.

This powerful and active drug was used for the first time by Fourcroy, in 1796, with the idea that it might transmit some of its oxygen to the body. At its introduction, this salt was principally recommended as an antidote to scurvy. Chaussier proposed it as a remedy in croup. It had completely fallen into oblivion, when Dr. Blanche, repeating the experiments made in 1847, by Hunt and West, with this medicine in the treatment of gangrene of the mouth and pseudo-membranous stomatitis, was led to try it in the treatment of pseudo-membranous sore throat and croup. In this country the use of this remedy had received but little attention in the way of reported successes, except from few observers, among whom was Dr. Thomas Drysdale, who, in a paper read before the Philadelphia County Medical Society, in January, 1877, gave a history of some remarkable cures resulting from its use in diphtheria and pseudo-membranous croup. Dr. Shoemaker added that he also had met with marked and decided success from its internal use in scrofulous skin diseases; likewise Dr. M. Landesberg, of Philadelphia, had reported very gratifying results from its topical application in epithelioma of the eyelids.

Observation had shown that it is a powerful remedy to overcome many abnormal conditions of the system, and that it is equally powerful to do harm if not judiciously administered.

Dr. Shoemaker then passed to the consideration of its therapeutics, showing its decided action on the system, and that it acts in some hitherto unexplained manner in abnormal conditions of the blood, changing its character, and overcoming morbid states. It may be that it imparts the oxygen of the compound which is held in a loose combination, as has long been supposed, to the blood, or the salt may itself unaltered affect the blood.

In the proportion of a drachm to a glassful of water it is of service as a gargle in the various varieties of stomatitis, often quickly relieving the dry, red, and follicular congestion of the mucous membrane, and healing the ulceration when it exists.

As a local application and gargle in inflammation and ulceration of the tongue, patiently and long-continued, more particularly in the latter, it seems to do more good alone, or at times in combination with astringents, than any other remedy.

Used either as a gargle, or applied locally with a brush or by atomization, in simple catarrh of the anterior and posterior nares and in simple and chronic catarrh of the larynx, it has, when constantly used, in many cases positive and curative action.

He has used a solution of chlorate of potassium, one or two drachms to a half a pint of water, as a gargle in diphtheria and phthisis. In the former affection it will cleanse the mouth and throat, thoroughly disinfecting the parts, wash off the membranes, and soothe and relieve much irritation. In phthisis, the free use of the chlorate of potassium gargle will relieve the dry and excessive state of mucus of the parts, and will soothe the mucous membrane, giving very great comfort and ease to the patient.

In subacute and chronic stages of otorrhœa, an injection of chlorate of potassium, in the strength of five to ten grains to the ounce of water, is often effective. In ozena, a douche of a solution of the chlorate of potassium, in the proportion of one drachm of the salt to a pint of water, will cleanse and thoroughly disinfect the parts.

As an injection also in leucorrhœa, in the strength of one to two drachms to a quart of water, it will often prove very useful by lessening the discharge and relieving congestion. In gonorrhœa, used as an injection two three times a day, in the proportion of five or ten grains to an ounce of water, it will very often produce an alterative effect upon the parts, and completely arrest the discharge.

As an application in ulcerative epithelioma and ulcerative lupus, it is at times very efficacious, and he had seen instances in both these diseases in which the surface has been completely healed by its continued application.

As an injection in chronic dysentery, in moderately strong solutions (1 dr. to 1 oz.), its use has been recommended; and it often heals painful rectal ulcerations.

The chlorate of potassium will bring about a beneficial effect in chancroid, applied either as a solution or dusted over the parts. In obstinate and chronic ulcerations, gangrenous sores and ulcers discharging fetid secretion, the application of the salt, either alone or dissolved in water, possesses peculiar advantages on account of its healing and deodorizing qualities.

In pustular eczema, particularly in cases occurring in scrofulous children, the use of a solution containing one or two drachms to the pint of water, applied with old muslin, will very frequently lessen the discharge and heal the surface.

Glands that are broken down, filled with pus, and sinuses connecting these parts, are benefited by washing them with a saturated solution of chlorate of potassium.

Dr. Shoemaker next referred to its internal use, and said that the chlorate of potassium, as a remedy in croup and diphtheria, had been used with great advantage from the time that it was first successfully applied by Chaussier in 1819.

He had used the chlorate of potassium with the most marked benefit in phthisis.

In marasmus, particularly of children, the use of small doses of this salt has a very satisfactory and beneficial influence.

For diseases of the skin the chlorate of potassium, given in various doses, according to the ability with which the patient bears the drug, is of the greatest value either in modifying or curing very many cutaneous affections. He has, at times, very often succeeded in aborting or curing many pustular diseases with moderate doses of chlorate of potassium. It is especially efficacious in ecthyma, particularly in those who are broken down in health. In boils, carbuncles, stys, pustular acne, pustular eczema, and sycosis, it lessens the tendency in many to suppuration, and should this latter condition be established before administering the salt, it will be largely instrumental in overcoming the abnormal state of the system.

Dr. Shoemaker further spoke of the good effects produced from its use in scurvy, influenza, yellow fever, rheumatism, cyanosis, hemorrhagic diathesis, dropsy, syphilis, etc., and then gave the manner of its administration.

If the salt is given in small doses it will pass quickly and more readily into the circulation taken before meals, diluted with water. If, on the other hand, very large doses are administered, it will probably be better borne by the stomach after meals. It is best given dissolved in simple water, although its taste may be entirely disguised by adding the salt to an effervescent powder and mixing the latter with lemonade. Milk, neutral mixture, and the bitter infusions and tinctures are also good vehicles for chlorate of potassium. The dose will vary according to the affection and the condition of the patient. He usually gives it in from one-half to thirty grain doses every one, two, or three hours, freely diluted with water. In the above doses it is well borne by the stomach, even in those who are very weak and enfeebled. He generally begins with a small dose, and gradually increases it until the patient shows some sign of its effect or he sees improvement in the disease. Those who are large, flabby, and apparently vigorous, will improve under smaller doses, as large amounts will sometimes serve to still more increase the quantity of fat on the body. On the other hand, the pale, weak, and enfeebled will bear much larger doses, and will often increase very rapidly in weight.

Dr. Hollister, of Illinois, thought the remedy acted either through the oxygen or the chlorine, or through the combination of these two agents.

Dr. Gant, of Mississippi, believed that it was an anti fermentative, and acted like an antiseptic.

Dr. Bennett, of Michigan, regarded it as an eliminator of morbid material, and as an excellent antiseptic, whether used locally or internally, in diphtheria, particularly sthenic cases.

Dr. N. S. Davis, of Chicago, thought it produced its effects by the liberation of oxygen in the blood. In the cyanosis of young children suffering from imperfect closure of the foramen ovale, he had used the remedy internally with marked benefit. He said that the remedy acted in three ways: 1, by introducing free oxygen into the blood; 2, by stimulating the nervous centres and the nerve-cells themselves; and 3, by acting upon the atoms promoting tissue change.

Dr. Lester, of Kansas City, had used it successfully in anæmia, and believed that it increased the number of red blood-corpuscles.

Dr. Boyd, of Indiana, thought that the *modus operandi* of the drug was not known. Nevertheless, we should not hesitate to use it in cases in which it had been found, by experience, to be beneficial. So far as its use in diphtheria was concerned, he preferred quinine and iron.

Dr. Bell, of Kansas, was of the opinion that physicians used the remedy more twenty years ago than at the present time, and that it had not been found generally useful in malignant diphtheria and scarlet fever. It was most beneficial as a local application to mucous membranes.

Dr. H. F. Campbell, of Georgia, then spoke on

THE USE OF TOBACCO AS A CAUSE OF DISEASE,

and also of the deprivation of the patient of tobacco who had been accustomed to its use. He thought it possible that small doses of nicotine or the tincture of tobacco might be necessary in some cases.

Dr. Prince, of Illinois, thought that the use of tobacco under the circumstances indicated by Dr. Campbell was unnecessary, and Dr. Shoemaker believed that inasmuch as the taste for the weed was usually absent in such cases, the system did not require it.

Dr. Octerlony referred to a case of cancer of the stomach, in which the first symptom noticed was a distaste for tobacco.

The Section then adjourned to meet Wednesday, at 3 P.M.

WEDNESDAY, JUNE 7TH—SECOND DAY.

Dr. J. V. Shoemaker, of Philadelphia, read a paper on

THE TREATMENT OF SYPHILIS BY SUBCUTANEOUS SUBLIMATE INJECTIONS.

He spoke at length of the progress in medicine of the hypodermic method of treating diseases, from its first use by Alexander Wood, of Edinburgh—whose experiments date since 1853—up till the present time. The first to use hypodermic injections of mercurial salts was Scarenzio, of Pavia, who was soon after followed by Hebra, Hunter, Lemin, Martineau, etc. Some three or more years ago he began this treatment in all the syphilitic patients presenting themselves, and he has now one hundred and thirteen cases which he has treated—in the American Hospital for skin diseases, in the dispensary, and in his private practice—with the subcutaneous injection of corrosive sublimate, and with most excellent results.

Of this number, sixty-four of the men and twenty-six of the women were affected with the various syphilitic eruptions of the skin. There were seven of the men and one of the women affected with gummata of the cellular tissue. Six of the men and one of the women suffered from syphilitic disease of the bones. Three men and one woman had syphilitic affections of the larynx; and one man and one woman were affected with syphilitic iritis.

In his practice he usually selected for his hypodermic injections a good glass syringe. Experience

has proven to him that these were the best. To these syringes he ordered specially long needles, of the length of one and a half inch or so, because his object was to penetrate deeply into the subcutaneous cellular tissue. He has learned from the experience of others that the cause of the abscess following hypodermic injections of corrosive sublimate was due either to the use of a very short needle, that would not penetrate sufficiently, or to the operator who may have failed to push it far enough into the integument; and should the latter be the case, the fluid will be deposited in the stratum of the cuticle in which the absorbent vessels are wanting, and inflammation will undoubtedly supervene, causing abscesses. If, on the other hand, the operator has a sufficiently long needle, and will take the precaution to drive it down to the cellular tissue, which is abundantly supplied with absorbent vessels, no injurious effect will follow. He always, in addition, had his patients in private practice to own and carry their own needles to prevent any possible contagion.

He found *gold* to answer every purpose, as it was the only one of all the metals not affected by the sublimate solution.

His gold needle is always in good order, never rusts, and is withal—in proportion to the other needles he uses—the cheapest. As he has found the rust of the steel needles is hastened by the wire that is passed through it, he has remedied this by using bristles, and oiling them previously to passing.

The solution which he uses is: Corrosive sublimate, 1 part; distilled water, 100 parts.

After using all the various combinations upon the cases under his care, he came to the conclusion that plain water and the sublimate gave him the best results.

The parts which he usually chose for the injection were the infra-scapular and sacral regions, which are the least sensitive, and are also supplied with a large quantity of subcutaneous cellular tissue in which to inject the solution. He has also made injections into the gluteal regions, on either side, into the tissues on the side of the thorax and into the thighs and legs; but his conclusions are that the infra-scapular and sacral regions are decidedly the best, as in his experience the pain of the injection is not so great or persistent as in the other parts.

The skin surrounding the puncture became a little red and swollen in a short time, which disappeared at longer or shorter intervals, at the most in a few days' time—though in some of the cases the swelling remained for quite a time, forming hard spots about the size of a shellbark, which would eventually disappear by degrees, leaving no bad results. During the whole time, in the treatment of the 113 cases, he gave 2,132 injections in the course of 206 days, and had not had any inflammation or abscesses.

Of these cases, 36 disappeared at various times during the course of treatment, and failed to continue the same to a complete cure; 68 took from day to day the injections until they were discharged; and of the number 41 were entirely cured as far as he has been able to learn; the remaining 27 had relapses at various times; 10 having a first, 13 a second, and 4 a third, whilst there are 9 under treatment at the present time, receiving their injections daily.

Of those suffering from relapses, he has only a record of 5 that have entirely recovered; 3 having recovered in the first, and 2 in the second relapse. The majority of these relapses were due to the habits of the patients more than the want of efficacy of the sublimate injections.

Many of the patients to whom he gave the sublimate injections had had mercury previously given them by the mouth, without any decided results either upon the disease or any toxic evidence of the absorption of the mercury by the intestinal canal; others were totally unfit to receive the drug internally, being debilitated and broken down, or having weak digestive organs and an irritable state of the intestinal tract. In such patients it is the only medicinal means, he believes, that can be used successfully in neutralizing the specific poison in the system. It also enables the physician, as in the majority of the cases referred to, to give tonic remedies by the mouth, together with a good, substantial, and nourishing diet which can be properly digested, and the combination will act promptly and effectually upon the disease.

He believes this method to be the most speedy and certain way of eradicating syphilis, and preventing, at the same time, a loss of flesh and vigor of the body that unquestionably follows pouring digestive mercury or iodide of potassium into the stomach. It is the belief of Dr. Shoemaker, that where the hypodermic use of the sublimate has failed, it has been entirely due to the carelessness of the operator.

From the experiments he has made, his conclusions for its use are:

First.—The *accuracy* and *precision* of the dose. By the stomach corrosive sublimate changes into an insoluble albuminous precipitate, and does not remain long enough in the body to become absorbed, and hence much of it is lost; so, no matter how precise you may be in administering the drug by the mouth, it is almost certain that some of it passes away unabsorbed. By the hypodermic method this is entirely done away with, the precise dose is taken up by the absorbents into the system, and after its object has been attained it is eliminated through the proper channels.

Second.—By its use we *preserve* the healthful action of the stomach and bowels.

Third.—Its *use:* That we may use it in almost all cases—in fact in all—without any baleful results is conclusive to its application.

In conclusion, he related some of the reasons which render the method distasteful to many physicians:

First, a dirty syringe or a rusty needle produces inflammation, and an abandonment of the method by one; again, a short needle or a failure to drive it into the cellular tissue has caused an abscess, and non-success to another; the care to scatter the solution when injected, or to force out the air in the needle, gives pain to the patient and discourages a third; the building up the system with tonics and good food, and the use of the sublimate at the same time, has been overlooked by the fourth, and the results drop below his expectation. The peculiar susceptibility of some persons to certain drugs, in very small doses, are lost sight of, the mercury suddenly poisoning the patient, and the physician condemns the method.

The paper was discussed by Drs. Gallaher, of Pittsburg, Pa.; Frye, of Oyster Bay, N. Y., and J. H. Bennett, of Cold Water, Mich.

The Section then adjourned.

THURSDAY, JUNE 8TH—THIRD DAY.

DR. M. DONNELLY, of New York, read a paper on

SALICYLATE OF POTASSA, AND ITS USE IN ACUTE RHEUMATISM AND DYSPEPSIA.

After reviewing the history of the introduction of this remedy for acute articular rheumatism, speaking of the efficacy, and alluding to the liability to cardiac complications while it is being administered, Dr. Donnelly said that he had been making experiments, hoping to find some alkali which could be combined with the salicylic acid and make a more thoroughly alkaline salicylate than that given by combination with soda. Such an alkali he had found in the bicarbonate of potash—two parts of bicarbonate of potash and one part of salicylic acid dissolved in a small quantity of water gave a neutral solution. The potash was then increased in quantity until one part of the acid united with two parts of potash—say ten grains of acid to twenty grains of alkali in a drachm of water—formed a clear alkaline solution. This solution, evaporated to dryness, formed the salicylate of potassa. This compound was soluble in double its weight of water, was rapidly absorbed, and in mild cases the urine and perspiration could be made alkaline within a few hours; in severe cases several days might be required.

Dr. Donnelly had also found the compound very beneficial in the treatment of flatulence, pyrosis, and dyspepsia of the acid form. He recommended it as a substitute for any of the bitter tonics so commonly used in most of these cases of loss of appetite.

DR. HOLLISTER, of Chicago, had used the salicylates with marked benefit. He directed attention to their liability in large doses to reduce the force of the heart's action.

DR. WYCOFF, of Buffalo, had used salicylate of potash with good results, and

DR. GALLAHER, of Pittsburg, doubted the claimed superiority of salicylate of potash or the soda compound.

DR. THOMAS N. REYNOLDS, of Detroit, had used salicylate of soda with benefit frequently, but not invariably, in rheumatism. He believed cases should be selected, if possible, in the administration of any form of treatment. Had seen good results from hourly minim doses of hydrochloric acid in water alone, in acute rheumatism, which suggested to him that the alkaline treatment was not always an indispensable element in the treatment of rheumatism. Constitutional and local miasmatic and climatic influences often determined the line of treatment, and we should not rely too conclusively on any one drug or plan of management.

DR. KYLE, of Indiana, thought salicylates of soda and potash useful, but found quinine and iron indispensable in malarious districts.

DR. SHOEMAKER, of Pennsylvania, thought that potash was required in rheumatism.

DR. JOHN A. OCTERLONY thought the soda and potassa salicylates were more particularly applicable in recent and very acute cases with high fever. In the obese, alkalies were more beneficial. In sthenic cases, aconite and veratrum viride often produced most rapid and satisfactory results. In the anæmic and weak he preferred large doses of tincture of the chloride of iron.

After adopting a resolution extending a vote of thanks to the Chairman and Secretary for their faithful, efficient, and courteous discharge of their duties, the Section adjourned.

SECTION ON ORAL AND DENTAL SURGERY.

DR. D. H. GOODWILLIE, of New York, Chairman.
DR. TRUMAN G. BROPHY, of Chicago, Secretary.

TUESDAY, JUNE 6TH—FIRST DAY.

The Chair appointed Drs. Allport, Brophy, and Williams sub-committee, to which all papers read before the section should be referred.

DR. WILLIAM D. KEMPTON, of Cincinnati, presented a paper on

ORAL HYGIENE,

of which the following is a synopsis:

From the beginning the sole aim of practitioners was to discover a cure for disease and, although sometimes harmful, the medication received the credit. Now, one of the main objects of practitioners is to prevent disease. The profession is indebted to specialists for many, if not most, of these discoveries, as they are more apt to arrive at definite results than those whose attention is occupied with the whole field of medicine.

Oral hygiene was very important, and the evils arising from the neglect of it were far reaching. Good, healthy, even strong teeth were beautiful as well as serviceable, and indicated care. But when we find one whose teeth resemble the charred trunks of stately trees after the fiery scourge has visited the forest, and whose breath is suggestive of a cesspool, we ask, whence comes this sad havoc?

Dr. Kempton then entered into a careful analysis of the teeth, giving their elements and functions, and the acid theory of decay by Dr. George Watt, with the factor that modifies the action of acids, viz., vitality. Then followed a list of the evils resulting from diseased teeth, showing that the whole system was more or less affected and deranged; many of the cases of headache, earache, affections of the eye, and stomach being traceable oftentimes to badly decayed teeth.

The doctor closed his paper with directions for preventing decay in teeth, prefacing with the remark that those teeth in which decay had already set in should be either extracted or filled. Physicians should feel it their duty to point out to their patients the results of neglect of the teeth, and no medical school should consider its curriculum complete unless some attention is paid to the teeth.

PHOSPHATES IN FOOD.

The paper was discussed at length by Drs. Williams, Talbot, Allport, Lawrence, Marshall, Goodwillie, Ellmer, Reed, and others, during which the subject of phosphates in food was introduced. The enamel of the teeth is composed mainly of phosphate of lime, and Dr. Allport was very earnest when he made the remark that our food should be taken as nearly as possible in the condition in which God prepared it. He referred especially to wheat, asserting that the so-called patent process of making flour eradicated much of the phosphate in the wheat, the result being that not enough of this was left to keep the teeth strong and healthy. He did not advocate the use of phosphates alone, but he did protest against food which had not enough of them to keep the system and teeth in perfect order.

DR. LAWRENCE antagonized the stress placed upon this subject, alleging that other elements were as necessary as phosphates.

The Section then adjourned to meet at 3 P.M. on Wednesday.

WEDNESDAY, JUNE 7TH—SECOND DAY.

HEREDITY IN DENTAL DEVELOPMENT.

DR. W. C. BARRETT, of New York, briefly sketched a case which had come under his observation, and which he illustrated by plaster casts, showing the persistence of heredity in dental development.

DR. J. S. MARSHALL, of Syracuse, N. Y., then read a paper on "The Need of Dental and Oral Surgeons in the Army and Navy." The following is a synopsis:

This subject has often been brought to the attention of the profession, but never formally till August, 1861, at the American Dental Convention in New Haven, where it was referred to a committee of five, who, after consultation with Surgeon-General Hammond, reported favorably to the appointment of dental and oral surgeons in the army and navy. In 1868 Senator Hamlin introduced a bill before Congress providing for the appointment of such surgeons in the army and navy, but this measure died before it was born. The second attempt was made during the Forty-second Congress by Representative Townsend, who merely advocated the appointment of such surgeons to the military and naval academies, but nothing came of this but the appointment of a dental surgeon at the naval academy at Annapolis with the rank of assistant surgeon. Dr. Marshall then stated the necessity existing for such appointments.

The government provides for the care of a soldier in all cases, except where his teeth are concerned. Soldiers on the frontier and sailors on a long cruise have no opportunity of receiving dental services, no matter how much they may need such attention, and the disease must run its course, being turned over to the bungling of the hospital steward or some less competent person. The treatment of fractures or gunshot injuries of the lower jaw is the same as twenty-five or thirty years ago, being much behind the times. The interdental splint, invented by Dr. J. B. Bean, of Georgia, during the civil war, and improved by Dr. Norman Kingsley, of New York, is a very great improvement in the treatment of these cases, and is indorsed by the best surgeons the world over. The success with this splint has been remarkable.

The objection to the appointment of dental and oral surgeons in the army and navy is that the amount of oral diseases is so small as not to require specially educated surgeons to treat them. Dr. Marshall then gave some statistics showing the relative number of men in the army and navy who, in the years 1878 and 1879, were reported as having needed dental services, also the opinions of the surgeons general of the army and navy, General Hancock and Admiral Porter, relative to the appointment of such surgeons. To petition Congress for action is useless, without the heads of medical departments see the need and make the recommendation. The paper closed with a recommendation that a committee be appointed by this Section to arrange a blank statistical report covering all the dental and oral diseases, and request the surgeons general of the army and navy to incorporate them in the regular medical and surgical reports.

A lively discussion followed on the subject of the paper, which resulted in the offering of a resolution by Dr. Allport that a committee of three be appointed by the Section who, in connection with Dr. Maynard, of Washington City, and the surgeons general of the army and navy, should make what efforts they deemed advisable regarding the appointment of dental and oral surgeons in the army and navy, and to report to the association next year. This motion was adopted, and Drs. Allport, Marshall, and Williams were appointed such committee.

FOOD IN ITS RELATION TO THE DEVELOPMENT OF TISSUES.

DR. LAWRENCE, of New York City, presented a resolution calling for the appointment of a committee to consider the subject of food, including mastication, insalivation, digestion, and assimilation, in its relation to the development of the different tissues and organs of the body.

Drs. Lawrence, Talbot, and Kempton were appointed as the committee.

The Section then adjourned to meet Thursday at 3 P.M.

THURSDAY, JUNE 8TH—THIRD DAY.

DR. GOODWILLIE called attention of the Section to cases of

NECROSIS FROM ARSENIC,

and illustrated them with wax models.

CASE I. showed, by two models, necrosis of lower jaw from each ramus forward. The case, before and after, with a new deposit of bone without any deformity. Photograph of the patient also shown.

CASE II.—Two models showing a case of poison by arsenic and necrosis of right superior maxillary.

a. Showing case one week after removal of necrosed bone; without, in the least, disturbing the soft tissue; also showing the formation of new bone.

b. The new bone complete and the mouth perfect; and no external deformity.

CASE III.—Upper maxillary showing abscesses formed at nearly all the teeth, the result of applying arsenic to destroy sensibility of the dentine before filling the teeth.

The above served to show the sad results of the improper use of this powerful agent in devitalizing dental pulps.

DR. EUGENE S. TALBOT, of Chicago, then read a paper on

THE INJURIOUS EFFECTS OF MERCURY AS USED IN DENTISTRY.

The paper was confined to the use of amalgam fillings in natural teeth.

"There can no longer be doubt that amalgam fillings in teeth will sooner or later produce mercurial poisoning. The dire effects of this metal are not always seen immediately after the fillings are inserted, years sometimes elapsing before the injurious effects are felt and noticed."

The history of two well marked cases were given by Dr. Talbot, the persons affected having called upon him for treatment. The amalgam fillings were removed, and gutta percha temporarily substituted, these in turn being replaced with gold, after which all symptoms of mercurial poisoning disappeared. A detailed account of a series of experiments made by him were then presented, the conclusions and results being as follows:

First.—Mercurial vapor is given off from amalgam fillings at all ages and from all varieties, even from

fillings sixteen years old, the vaporization being sufficient in quantity to respond to chemical tests.

Second.—Minute doses of mercury, if taken internally three times a day, are capable of producing decided effects.

Third.—Mercury when inhaled into the lungs is far more active than when taken into the stomach.

Fourth.—If small doses taken into the stomach occasionally are capable of producing marked effects, and the vapor is much more active than the solid preparations of the metal, is it not a necessary consequence that amalgam fillings, which are constantly giving off mercurial fumes to be inhaled into lungs, not a few times daily, but always, without cessation, day or night, do, in many sensitive persons, produce deleterious effects?

Fifth.—When tons of this material are consumed annually, is it not credible that many constitutions are affected?

Sixth.—Physicians in treating dyspeptics, anæmics, and persons suffering from nervous debility, would do well to examine the mouths of patients and know if artificial teeth on red rubber or fillings of natural teeth have in their composition mercury or any of its compounds.

EDUCATION OF DENTISTS.

The subject, How Dentists should be Educated, was presented by Dr. W. W. Allport, of Chicago, in a paper of considerable length. The introduction was a review of dental surgery—it, with all other branches of medicine, having emanated from a common centre, and the possibility was that in the future these diverse systems would more and more tend to consolidation.

Dr. Allport then said that the dental and oral surgeon must be educated both in mechanical dentistry and oral surgery, for no disease can be intelligently treated without a knowledge of the histology, anatomy, and the physiology of the organ or organs diseased, as well as the pathology, prognosis and rationale of the treatment employed to restore the parts to a healthy condition; and this is medical science. The successful oral surgeon must have a thorough medical education in all its branches, supplemented by special instruction in dental surgery. Over forty years ago Drs. Harris, Hayden, and others sought to establish a department for teaching dental and oral surgery in the medical department of the University of Maryland; but their application was refused. Dr. Harris, however, succeeded in organizing what was known as the Baltimore College of Dental Surgery, and the graduates of this institution were given the degree of D.D.S.—doctor of dental surgery. In addition to this, several medical colleges have been induced to establish dental schools in connection with their medical departments, but as yet none of these institutions have required a full medical education of their dental graduates.

All dental and oral surgeons should receive a medical education and become legitimate specialists in its practice, and all medical graduates should be as fully educated in diseases of the teeth and the science of their treatment as they are in other diseases.

Dr. J. B. Lawrence, of New York, then read a paper on

MEDICO-DENTAL SCIENCE,

after which the Section adjourned.

SECTION ON DISEASES OF CHILDREN.

Dr. William Lee, of Baltimore, Chairman.
Dr. E. C. Miller, of Iowa, Secretary.

Wednesday, June 7th.

The first paper was read by Dr. N. S. Davis, of Chicago, on

THE MEANS OF LESSENING THE MORTALITY OF INFANTS FROM BOWEL AFFECTIONS.

The importance of the subject could not be over estimated when it was remembered that one-third of the human race perish before they reach the fifth year, and that a large percentage of these early deaths are the direct result of bowel complaints.

Nearly all the sanitary and hygienic measures of the present day are aimed at the *removal* or *prevention* of the cause of the disease, both predisposing and exciting. But there are many influences which either predispose to or excite attacks of disease which are not under human control. The problem presented for consideration is not how to prevent or destroy them, but how best to shield the human system from their injurious effects. For instance, bad food may be destroyed and good substituted; bad air in dwellings may be changed by ventilation; soil, wet and of decomposed matter, may be drained and cultivated, but the meteorological conditions of the atmosphere, whether they relate to impurities, sudden and extreme changes, or waves of continuous high or low temperature, are not amenable to our control, and yet much can be done to mitigate or prevent their injurious effects. Nearly all the recent writers on the diseases of children class the cases of serous diarrhœa and cholera morbus in children under two years of age, usually called summer complaint and cholera infantum, with local inflammations under the general name of catarrhal gastro-enteritis; and while they all assert that these forms of disease are most prevalent and fatal during the warmest months of summer, they set forth, as the chief causes, improper feeding, impure and changed milk, impure air, the process of dentition or teething, and overworked, badly fed, and unhealthy mothers.

These causes are represented to produce gastric or intestinal indigestion, or both, which so increase the irritation of the mucous membranes as to cause a more or less rapid serous exudation into the gastro-intestinal canal. Indigestion is generally regarded as the cause of the catarrhal irritation, while the cause is the result of bad feeding, impure air, teething, and unhealthy mothers. Bad milk is also alleged to be another cause. Other causes produce effects.

Bad milk and food are prevalent in all communities during the winter as well as summer. Children cut their teeth in December as in July, and unhealthy mothers exist during one part of the year as well as another. If any of these causes produced infantile cholera it would be frequent in all seasons. The records show that the prevalence of all grades of these two forms of disease are restricted almost entirely to the time between the last week in June and the last in September. In Chicago, in 1872, the reports of the Board of Health show 8 deaths in April, 6 in May, 23 in June, 246 in July, 163 in August, 69 in September, 13 in October, and 2 during the rest of the year. Other years show the same results, and in all northern and eastern cities the ratio is the same. The diseases prevail little in cities

so located that there is only a short range of temperature between the warmest days of summer and the coldest of winter, and where the sea breezes and other causes make the summer nights cool. The milk distributed in San Francisco and New Orleans is the same as that in Boston and Chicago, and the nursing mothers are no more free from mental and physical infirmities. An examination of the statistics of these several cities shows a ratio of only about five deaths from cholera infantum annually for every 10,000 inhabitants in San Francisco, seven in New Orleans, twenty-five in Boston, and thirty in Chicago. There must therefore be some efficient cause not common in all large cities.

A RECORD OF THE DISEASE

and coincident meteorological conditions of atmosphere were commenced some years ago, and for three years records were kept in Cairo, Davenport, and Omaha. The reports of these records were given in this association and published some years ago, and showed :

First.—That the prevalence of the affections under consideration is limited principally to July, August and September, commencing with the first wave of high atmospheric heat that continues days and nights for more than five days, which, in the latitude of Chicago, is sometimes the last week of June, but more frequently the first week in July, and continues more or less during the succeeding ninety days.

Second.—That while the deaths from these affections in any city or given community will be nearly the same in the two first months after they begin in July and August, the date of the initial symptoms or beginning of the disease in three-fourths of all the cases will be in July, very few originating after the first of August. Many cases commencing in July continue until the months of August or September, causing wasting and death.

Third.—That it is not simply high or extreme heat of temporary duration, such as that of a single day or any number of days, with cool nights, which favors the development of the disease, but continuous high temperature day and night for several days; and if, in addition to the heat, the air be stagnant from lack of winds or obstructions, as in large cities, or from

DEFECTIVE VENTILATION,

the effect is greatly increased. This explains why these affections are more numerous and fatal in cities than in rural districts, and why they prevail so little in even large cities located in warm climates, provided the location be such as to afford cool breezes at night.

Fourth.—That while the great majority of attacks which occur in any given summer are found to have their beginning in July, or during the first thirty or forty days after the first wave of protracted high temperature for the season, they are not equally distributed over the whole of the month.

Having thus traced the origin of that part of infantile mortality caused by this disease, Dr. Davis inquired how this combination of circumstances could affect the living human body. We have the physical law that the higher the temperature of the air the rarer it becomes and the less oxygen is contained in it. A person breathing at a high temperature would receive less oxygen than at a lower temperature. Stagnant air becomes more rapidly exhausted than moving, and the physical law of expansion by increase applies to the living as well as to dead matter; consequently high heat acting on the living body tends to increase the distance of the atoms from each other and thereby lessen the force of vital affinity, while it increases the excitability or susceptibility to impression. The capacity of the blood for taking up oxygen or holding it in suspension depends much upon the proportion of saline elements it contains, and under a continuous high temperature the increase of cutaneous exhalation rapidly diminishes the free salts of the blood and lessens the capacity to receive the oxygen from the air-cells of the lungs in exchange for its carbonic acid gas. Colitis and recto-colitis or dysentery seldom occur until late in the season, when warm days are followed by cool nights and

FREQUENT CHANGES FROM HEAT TO WET AND COLD.

occur, and even the indigestion which has been so generally suggested as a cause of summer complaint is itself the result of the impairment of natural gastric and intestinal secretions, and the increase of more serous exudation—the primary fault not being so much in the quality of food as in the morbidly sensitive and relaxed condition of the whole inner surface of the digestive canal. The children are affected more than older persons, because of the less mature development and greater sensitiveness of their gastric and intestinal mucous membranes and glandular structures and their much more constant confinement indoors. If this is correct, it indicates clearly that our efforts to lessen infant mortality from these diseases must embrace such measures as will secure for young children a better supply of fresh, pure air, for increasing the oxygenation and discarbonization of the blood and maintaining the activity of the vaso-motor nervous system, and as well counteracting the effects of high temperature by increasing the general tonicity and lessening the excitability of the tissues generally. Measures for the first object must consist in securing better ventilation of dwellings and especially nurseries and sleeping rooms during the warmest part of the summer, the sending of young children with their mothers and nurses from densely populated districts to moderately

ELEVATED, HEALTHY LOCATIONS,

or to floating hospitals, receiving ships, or large bodies of water, during the special period of high heat. For accomplishing the second purpose, he knew of no measures so efficient, and at the same time within the reach of the poorest part of the population, as the judicious use of the *sponge bath*. Whenever the human system is relaxed and rendered morbidly sensitive by continuous high heat, causing the infant to be languid, restless, and sometimes pale, a free bathing or sponging of the whole surface with water simply as cool as is comfortable, always produces a refreshing and invigorating influence, which continues from six to twelve hours. Consequently, if mothers and nurses could be so instructed by their family physician that, during every wave or period of high atmospheric temperature in which the mercury did not fall below 70° F. during the night, each child under two years of age should be regularly given a

FULL SPONGE BATH IN THE EVENING

as well as in the morning, and their sleeping rooms should be as well ventilated as possible, such a course would diminish the attacks of serous diarrhœa and cholera infantum one-half, and conse-

quently very greatly lessen the infant mortality from these affections.

It is well known to every careful observer that a large majority of all the attacks of this form of disease show their first beginning during the last half of the night or early in the morning, owing to the long continuance of the high temperature, coupled with the more still and confined air of the night. The increased tone of the whole vascular system produced by the stimulant and tonic effect of a comfortably cool sponge-bath on the function of the vaso-motor nerves, applied in the evening, would enable thousands of these little restless sufferers to pass the whole night unharmed, when without it the dread weakness would begin. The views presented in regard to the causes and nature of the affections called summer complaint and cholera infantum also afforded clear indications for the most rational and successful explanation of remedial agents in the treatment of those affections in all their grades of activity.

Dr. William Lee, of Baltimore, then read a paper entitled

OBSERVATIONS ON RICKETS,

which was discussed by Drs. A. W. Warden, of New York, and N. S. Davis and C. W. Earle, of Chicago.

The Section then adjourned.

SECTION IN STATE MEDICINE.

Dr. A. L. Gihon, United States Navy, Chairman.
Dr. J. H. Sears, of Waco, Tex., Secretary.

VACCINE VIRUS.

This subject was brought before the Section through a communication transmitted from the Wayne County Medical Society, Indiana, which contained a resolution asking for the passage of a law making it a crime for any establishment to distribute bovine vaccine virus, unless such establishment had received the indorsement of the National Board of Health.

A general discussion ensued, in which cases of poisoning from the use of impure and diseased virus were cited, etc., and finally the subject was practically tabled.

Dr. John G. Lee, of Philadelphia, then read a paper on

SUICIDE IN THE CITY AND COUNTY OF PHILADELPHIA DURING THE LAST DECADE.

From December 31, 1871, to January 1, 1881, out of 12,936 deaths requiring a coroner's investigation, 636 were from suicide, or a ratio of 53 to 1,000 inquests.

In opposition to the experience of European observers, he had found that suicide occurred most frequently among the married of both sexes. Of the 636 cases, in 444 the persons were married, in 138 single, and in 54 unknown. Of the 444 there were 370 men and 74 women. Of the 138 unmarried, 109 were males and 29 females. Of the 54 whose condition was unknown, 47 were males and 7 females. The suicides occurred by groups of months, as follows: May, 78; August, 71; and September, 57; October, 54; July, 54; and April, 54; June, 52; November, 49; and December, 44; February, 44; March, 43; and January, 36. Of the 636 cases, 24 were minors. The greatest number were between the ages of thirty and fifty years. The causes of death were: hanging, 119 males, 22 females; shooting, 114 males, 8 females; laudanum, 79 males, 17 females; cutting throat, 70 males, 13 females; drowning, 46 males, 11 females; arsenic, 11 males, 8 females. The remainder took their lives in various ways.

SICKNESS AND MORTALITY IN THE ARMY,

was the title of a paper sent by Dr. Smith, of the United States Army.

Dr. James F. Hibbard, of Indiana, to whom the paper was referred, presented the following abstract:

Surgeon Smith opens his communication with two questions, viz.:

First.—Has State medicine progressed within the past few years? and

Second.—Has its progress been marked by a diminution of disease and death?

And he has contributed such answers to his questions as he found in an analysis of the Surgeon-General's reports of disease and death in the army from 1871 to 1881, both inclusive, *i.e.*, eleven years.

He presents a table of eleven columns, giving the particulars for each year under the heading of each column.

The eleventh column gives the mean strength of the army at 25,599; the fourth column gives the sick-rate per year per 1,000 at 1,598; *i.e.*, every man in the army was sick over one and one-half times per year, and the death-rate was 8.71 per 1,000 of mean strength per year, while the death-rate for the sick was 4.63 per 1,000. The sickness among the white and colored troops was as 1,551 of the former to 1,498 of the latter, while deaths were as 845 whites to 1,104 colored.

It is to be noted that these statistics are compiled from cases of sickness, as distinct from wounds and accidents, and the reason for beginning the analysis with the year 1871 is because that year a new method of report was begun under fresh orders from the Surgeon-General.

Both the numbers of cases of disease and death vary considerably in the different years, but the author closes with this paragraph: "Not adopting, however, unreservedly, any conclusions from the figures of this table, I may still say that, as far as they go, these figures seem to show an advance in army sanitation and therapeutics in the past eleven years. Fewer men in proportion are now taken sick; fewer men now die than were taken sick and did die eleven years ago.

"I advise that the paper be not read, but be recommended for publication."

The subject of

EXPERT MEDICAL TESTIMONY

was then brought before the Section, and was discussed by Drs. C. H. Boardman, of St. Paul; Hibbard, of Indiana; Kedzie, of Michigan; Hughes, of St. Louis; Lomax, of Indiana; Reed, of Ohio; Hewett, of Minnesota; Brackett, of Iowa; Thomas, of Georgia; Van Velier, of Iowa; English, of New Jersey; and Callet, of Missouri.

Dr. Hibbard offered the following resolution, which was adopted and referred to the Association in general session:

Resolved, That the Section of State Medicine deems it advisable and more conducive to the ends of justice, that medical men called as expert witnesses should be subpœnaed directly by the court, instead of as now by either side.

The Chairman offered a resolution requesting the American Medical Association to recommend that Congress appropriate the sum of ten thousand dollars for the National Museum of Hygiene, which has been established at Washington by the Surgeon-General of the navy. (See pp. 655 and 658.)

THE WOMAN'S CHRISTIAN TEMPERANCE UNION.

The following resolutions, presented to the association in general session and referred to the Section on State Medicine, were the subject of discussion:

Whereas, Alcoholic intemperance is a prolific cause of disease, and prevention through the education of the people is one of the most powerful antidotes;

Whereas, We approve teaching the children and youth in the schools and educational institutions in this country, as facts of hygiene, the physiological dangers and evils resulting from the use of alcoholic beverages; and

Whereas, It is the acknowledged duty of the State to provide for such education of the people as is essential to good citizenship;

Resolved, That we recommend the State legislatures to enact laws requiring the physiological dangers and evils resulting from the use of alcoholic beverages to be taught in all schools supported by public money or under State control.

The adoption of the resolution was urged by Mrs. Mary H. Hunt, and discussion was participated in by Drs. Foster, of Portland, Me.; Hewitt, of Red Wing, Minn., and the Chairman. At its close it was voted to reaffirm the resolutions adopted in Buffalo in 1878:

Resolved, That in view of the alarming prevalence and ill effects of intemperance, with which none are so familiar as members of the medical profession, and which have called forth from eminent practitioners the voice of warning to the people of Great Britain concerning the use of alcoholic beverages, we the undersigned members of the medical profession of the United States unite in the declaration that we believe alcohol should be classed with other powerful drugs; that when prescribed it should be done with conscientious caution and a sense of great responsibility.

Resolved, That we are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount of physical and mental disease; that it entails diseased appetites and enfeebled constitutions upon offspring, and that it is the cause of a large percentage of the crime and pauperism of our cities and country.

Resolved, That we would welcome any change in public sentiment that would confine the use of intoxicating liquor to the uses of science, art, and medicine.

Dr. C. M. Hughes, of St. Louis, then read a paper

ON THE RIGHTS OF THE INSANE,

in which he maintained that the insane are entitled to medical inquiry by medical methods; are entitled to judicial rulings in accordance with the nature of their disease, and that the claim made by courts that a knowledge of right and wrong is always evidence of responsibility is incorrect. He believed that the criminal insane should be confined for life and be prevented from extending their disease to posterity.

The Section then adjourned.

SECTION IN OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

Dr. S. J. Jones, of Chicago, Chairman.

Dr. Carl Seiler, of Philadelphia, Secretary.

Tuesday, June 7th—First Day.

RECURRENT PHARYNGEAL HEMORRHAGE

was the subject of a paper read by Dr. Wm. Porter, of St. Louis, who reported two cases which had fallen under his observation. The hemorrhage seemed to come from the lungs, and that view was sustained by the fact that there was local evidence of pulmonary disease. It was determined, however, that the bleeding was not bronchial hemorrhage, but that the blood came from the tonsillar artery in one case and an ulcer on the velum in the other. The author went on to say that bleeding may occur repeatedly as the result of slight amount of ulceration in the pharynx or larynx, and in those cases the hemorrhage appeared like hemoptysis.

Dr. Seiler, of Philadelphia, and Dr. Carpenter, of Pottsville, Pa., had seen cases of hemorrhage from the pharynx and naso-pharynx, but Dr. Glasgow, of St. Louis, had never seen a case of real pharyngeal hemorrhage, all had been cases of bleeding from the naso-pharynx.

Dr. X. C. Scott, of Cleveland, O., reported cases of

DIPHTHERITIC CONJUNCTIVITIS TREATED WITH IODOFORM.

He applied the powder to the surface once a day, and the result had been very satisfactory.

Drs. Porter, of St. Louis; Tibbits, of Rockford, Ill.; Johnson, of Peoria, Ill.; Cohen, of Philadelphia, and others, directed attention to methods for correcting the odor of the drug, its use in syphilitic cases, etc.

Dr. Carpenter, of Pottsville, had used the remedy internally in exopthalmic goitre, two or three grains three times a day, and with very satisfactory results.

Dr. Glasgow had used it internally in ordinary goitre and glandular tumors, and with good results.

Dr. Cohen asked if it could be administered safely in pregnancy.

Dr. Carpenter said he had used it in the treatment of various affections in pregnant women, and without unfavorable effects.

Leiter's tubes for applying heat and cold to the surface of the body were then exhibited by Dr. Cohen, after which the Section adjourned to meet at 3 P.M., Wednesday.

Wednesday, June 7th—Second Day.

Dr. Seiler, of Philadelphia, exhibited galvanocautery instruments for nasal, pharyngeal, and laryngeal operations. (See Surgical Section.)

Dr. Johnson, of Peoria, reported a case of

TRAUMATIC DISLOCATION OF THE LENS UNDER THE CONJUNCTIVA.

Dr. Connor, of Detroit, reported a case of

TUMOR AT THE BASE OF THE SKULL.

The chief symptoms were progressive deafness in the right ear, progressive loss of sight in the right

eye, and general emaciation. No microscopical examination of the growth had yet been made.

Dr. Calhoun, of Atlanta, Ga., reported

A CASE OF VACCINATION UPON THE EYE.

In some unknown way vaccine virus was transferred from the arm to other parts of the body, and among others to the left eye, where the pustule ran its regular course, but the result was the destruction of the eye.

COMMUNICABLE DISEASES OF THE EYE

was made a subject for discussion and interchange of views.

Dr. C. R. Agnew, of New York, gave an account of the condition of the children in one of the large charitable institutions in the city of New York, to which he had been called. As the result of insufficient accommodation for washing, two long troughs being used by three hundred children, insufficient supply of food, and insufficient supply of air, only 150 cubic feet being allowed in the dormitories for each child, nearly every one was suffering from disease of the eyes, which the matron had regarded as a visitation of Providence, but which yielded to improved hygienic and sanitary regulations. The subject received a general discussion by Drs. S. T. Young, of Lafayette, Ind.; E. H. Hazen, of Davenport, Iowa; G. C. Smith, of Greencastle, Ind.; J. B. Johnson, of Peoria, Ill.; L. Connor, of Detroit; S. J. Jones, of Chicago, and E. Dyer, of Pittsburgh.

The following resolution was subsequently adopted:

Resolved, That a committee of three be appointed to consult as to the best means of bringing reliable information before the public, with a view of preventing the spread of communicable diseases of the eye.

The committee consisted of Drs. Jones, of Chicago; Dyer, of Pittsburgh, and Connor, of Detroit.

Dr. H. A. Johnson, of Chicago, reported a

CASE OF PARALYSIS OF THE ABDUCTOR MUSCLE OF THE LARYNX FOLLOWING DIPHTHERIA.

Dr. Seiler remarked that he had heard of similar cases, but had never seen one.

Dr. Seiler also reported a case of

FIBROID POLYPUS OF THE NOSE,

in which the growth was removed by means of Jarvis' snare. It had grown from the vomer and had a small pedicle.

THURSDAY, JUNE 8TH—THIRD DAY.

The Section considered a letter from Dr. Jeffries, of Boston, which was accompanied by a preamble and resolution from the Massachusetts Medical Society requesting the Section to present the subject of

COLOR BLINDNESS AND ACUITY OF VISION

before the association (see p. 658).

WARM WATER IN OPHTHALMIC SURGERY.

This subject was discussed in the Section, and the weight of evidence was in favor of its use in the earlier stages of throat and eye diseases; to afford the greatest benefit it should be applied as hot as the patient can bear.

The Section then adjourned.

Correspondence.

THE NEW YORK CODE AND THE AMERICAN MEDICAL ASSOCIATION.

To the Editor of The Medical Record.

Sir: Now that the Philadelphia fusillade and the St. Paul explosion are over, the members of the New York State Medical Society may venture to look out from the disappearing smoke, and see how their ancient and honorable body has withstood the attacks of the *News Ephemeris*, and the protesting and injured members of our profession in New Jersey, Alabama, and Arkansas. The picture that has been drawn by our friends is not a pleasing one. Our society is seen as a hastily called, perhaps packed, assemblage, dragooned by money-loving and altogether atrocious specialists, which, by some trick, overrides the wishes of the virtuous and rural general practitioner, and, in the language of an Alabama protester, gives "countenance and respectability to quacks and mountebanks, to enable them to ply their nefarious vocation." It will, perhaps, be useless to attempt to convince the adolescent and sprightly Philadelphia journal that its pen-pictures are inaccurately drawn. Indeed any word from the fifty-three or more members of our society who ventured to formulate their opinions on the Code, without consulting that self-constituted arbiter in all such matters, will probably be received as a red rag is said to be encountered by a youthful bovine of the male gender. Yet there are some who, undaunted by all this sound and fury, are waiting for a word from us. As Dr. Agnew has shown in his paper—which the American Medical Association, although able to listen to protests from Tuscaloosa and Oshkosh, could not hear—this action at Albany was not hastily taken. Neither was it taken at the suggestion of the dreadful specialists. Three of the five, of the committee, are general practitioners, who are not impecunious and not consumed by the greed for gain that we New Yorkers know has wrecked the moral purposes of the two specialists who acted with them. We can only suppose that the minority of the committee have succeeded in beguiling the simple-minded and unsuspecting majority, and then in inducing about forty-five other general practitioners to endorse their action. It is undoubtedly very difficult for the editor of the new Philadelphia journal to understand how the State of New York can think as it does on the subject of consultations.

Dr. Gross, in his address before the Surgical Society at its late meeting, with great temerity, accuses the American Medical Association of indulging in "Rip Van Winkle slumbers." It cannot be supposed that our young journal is already in the condition ascribed to the association, and yet its views on our new Code indicate a forgetfulness that New York has been advancing in the last twenty or thirty years, whatever Philadelphia may have been doing. Allow me to say, parenthetically, that there is reason to believe that there are some physicians in our neighboring metropolis who, having as yet not done much in "whooping up" public sentiment against the New York idea, will before long give the whoopers as much anxiety as is now evinced by another Pennsylvania dictator in regard to a movement against his ancient sway. Our worthy and distinguished friend, the editor of *Ephemeris*, although with irreproachable and customary courtesy, is also

fearful of the influence of the specialists in the revision of the Code. It would not be fair to retaliate by an argument in kind, or we might say, if the new Code is bad, because supported in part by specialists, what shall we say of the old, when its ablest advocate in New York is not even a practitioner of medicine, but is merely a pharmacist. But I suppose that if the new Code be really a good one, even its vicious and money-loving supporters cannot change its character.

The published indignation of the Nestor of American surgery has been the hardest blow our State society has had to bear, for he regards "our proceedings as an outrage which every member of the profession should consider as a deep personal insult." What is to be done with us, we are as yet not informed. Perhaps we are to be confined in the Moyamensing prison, or perhaps our distinguished townsman, that great exponent of ethics, who, while, according to the *Herald*, fresh from a consultation with a homœopath, contemptuously threw back his commission in the face of our society, will take the recalcitrant body in hand. Should this occur, we may only imagine the discomfiture and shame of our fifty-three, when they are summoned from New York, Brooklyn, Albany, Rochester, Utica, Elmira, Binghamton, and Yonkers, to face the awful front of the *Judicial Council* of the American Medical Association. What would happen before that tribunal can only be imagined, and we draw a vail upon the threatened disclosure.

Meanwhile, let our brethren in our various county societies, from Erie to Suffolk, remember that, although threatened, we are not yet destroyed.

The Philadelphia postal-cards have been received, the protests of the great scientific bodies of Florida and Kansas have been read, and yet the grain is waving in the valley of the Genesee, the canal boats are making the even tenor of their way from Albany to Buffalo, the forges of Troy and Hudson are not yet closed, ships are still entering the port of New York, and no Marius, from Philadelphia, is as yet sitting on the remains of our moral and physical ruin.

KNICKERBOCKER.

JUNE 16, 1882.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 11, 1882, to June 17, 1882.

ELBREY, F. W., Capt. and Asst. Surgeon. To be relieved from duty in Dept. of the Missouri, July 1, 1882, and to report in person to the Surgeon-General in this city. S. O. 137, A. G. O., June 14, 1882.

REED, W., Capt. and Asst. Surgeon. To accompany the troops from Washington Barracks, District of Columbia, and Ft. McHenry, Maryland, on their march to the summer camp at Gaithersburg, Md., and to remain on duty with them during the encampment. S. O. 104, Dept. of the East, June 9, 1882.

APPOINTMENTS.

To be Assistant Surgeons, to rank from May 23, 1882:

WILLIAM E. HOPKINS, of California, vice YEOMANS, deceased.

CHARLES C. BARROWS, of Mississippi, vice BREWER, deceased.

BENJAMIN MUNDAY, of Virginia, vice H. E. BROWN, promoted.

GEORGE F. WILSON, of Oregon, vice J. M. BROWN, promoted.

WILLIAM E. OWEN, Jr., of Tennessee, vice KING, resigned.

PETER R. EGAN, of New York, vice HUBBARD, promoted.

WILLIAM J. WAKEMAN, of Connecticut, vice CONES, resigned.

EDWARD EVERTS, of California, vice WHITEHEAD, deceased.

A. G. O., June 12, 1882.

Medical Items and News.

CONTAGIOUS DISEASES — WEEKLY STATEMENT. — Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 17, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
June 10, 1882.	14	6	94	5	80	47	17	0
June 17, 1882.	12	3	79	8	65	46	5	0

THE DEATH OF PROFESSOR C. HUETER took place recently at Greifswald. Although but forty-four years of age, he was one of the most eminent of German surgeons. He was at one time assistant to Virchow, afterward to Langenbeck. He wrote works on "General Surgery," "Joint Diseases," and "Special Surgery," which are standard treatises. He was a member of the German Reichstag, and Professor of Surgery of the University at Greifswald.

THE FOURTH INTERNATIONAL CONGRESS OF HYGIENE, which is to meet at Geneva, September 4th to 9th next, will discuss the following topics: "State and International Hygiene," "Prophylaxis of Epidemic Diseases and Sanitary Police," "Social and Medical Statistics," "Relation of Hygiene to Chemistry, Physics, and Mechanics," "Hygiene of Children," "School Hygiene," "Private and Public and Veterinary Hygiene."

DR. DUANE B. SIMMONS, of Yokohama, Japan, late Surgeon-in-Chief of the Government Hospital at that place, is on a visit to this city.

INTERNATIONAL CONGRESS OF HYGIENE.—At a recent meeting of the New York Academy of Medicine, Drs. Fordyce Barker, Austin Flint, and John G. Adams were appointed delegates to the International Congress of Hygiene, to be held in Geneva (Suisse), on the 4th of September next, to continue in session until the 11th of September.

TUBERCLE BACILLUS.—Dr. Ehrlich, of Berlin, recently announced another method of staining tubercle bacilli simpler than that employed by Koch. By this process the organisms appear larger than Koch describes them. The details are not yet given. The tubercle bacillus were recently exhibited by Mr. W. Cheyne and Mr. E. M. Nelson, at the Physiological Laboratory, King's College. The specimens

were prepared by Dr. Koch, and brought over by his assistant, Dr. Golldammer. A number of prominent microscopists examined them. No one, except Koch, has as yet announced that he has found them independently by Koch's method.

Medical Women. — The Philadelphia County Medical Society has again refused to admit medical women to membership. The Massachusetts State Medical Society has done the same. In the case of the latter, the society as a body voted for admission, but the council, which has authority in the matter, voted against it. In the case of the Philadelphia society the applications for membership were endorsed by the Board of Censors, but the candidates were rejected by the society.

Roosevelt Hospital, N. Y.—The managers of this hospital have decided to try, for one year, the experiment of continued service in the Surgical Division, under the direction of Dr. H. B. Sands, Dr. William S. Halsted having been appointed as his assistant.

A Bill to Prevent the Adulteration of Food and Drugs is now before Congress, and has been recommended for passage by the committee to which it was referred. It provides for an examination by inspectors of imported food and drugs. All that are found adulterated will not be permitted to pass the Custom House.

A Singular Legacy.—A patient who was benefited by Mr. Oliver's subcutaneous method, bequeathed to him his elbow-joint as a token of gratitude. The legacy proved a valuable one to pathological science, since the physiological process of renewal of tissue could be followed out almost step by step.—*Brit. Med. Jour.*

Garfield Memorial Hospital. — The United States Consul at Liverpool has written to the London papers, soliciting contributions to the Garfield Memorial Hospital. The Decoration Day contributions at Washington, D. C., to the proposed hospital amounted to $400.

The Sick Children's Mission of the Children's Aid Society commenced June 1st its usual summer work of providing free medical attendance, medicine, and nourishment to sick children of the very poor in all the tenement quarters of the city.

Attempt to Blackmail a Doctor.—A stranger presented himself at the residence of Dr. Ballou, in Lansingburg, N. Y., recently, and introduced himself as a Philadelphia detective. He informed the doctor that he had positive information that the doctor was a resurrectionist, and had the proof that he had recently removed the body of a young lady of Lansingburg, whom he named, from the grave, for dissection. The stranger informed Dr. Ballou that the matter could be hushed up for $500. The doctor asked him to wait until he sent for the money, but the "detective" departed, evidently fearing that the doctor intended to have him arrested.

Responsibility of a Druggist.—A patient, Mrs. R——, went to a drug store in this city with a prescription from Dr. V—— for sixty drops of laudanum. The druggist refused to give but ten drops. Mrs. R—— went home, took the medicine, and had a miscarriage. She then brought suit against the druggist, Mr. Diedel, for $10,000 damages, claiming that if she had had the sixty drops the miscarriage would not have occurred. The suit was recently tried. The defence was that the ten drops of laudanum given by Diedel to Mrs. R—— could not have affected her further than to temporarily lessen her pain, and that a druggist is not bound to personally administer dangerous drugs upon the order of a physician, his duty being simply to prepare medicines under the direction of physicians. Judge Beach sustained this view of the duty of a druggist, saying that such a tradesman would incur liability to indictment for manslaughter for having knowingly administered a drug or medicine which produced death. A large number of physicians were present, and most of them expressed the opinion that a miscarriage would have happened to Mrs. R—— even if sixty drops of laudanum had been administered to her. The jury gave a verdict for Druggist Diedel.

Nélaton and Hemorrhage.—The saying of Nélaton is often quoted: "If you have the misfortune to cut a carotid when performing an operation, remember it takes two minutes for syncope to supervene, and as many more before death occurs. Now, four minutes are four times the time required for a ligature, provided you don't hurry yourself. Never hurry yourself." This is very good advice, but the facts are hardly so rigid as is stated. Syncope and death will supervene at different periods, according to the previous and present condition of the patient.

Scarlatinous Erythema after Quinine.—Dr. J. W. Kales, of Union Springs, N. Y., referring to the article on page 627 current volume Medical Record, *i.e.*, "Scarlatinous Erythema following the Administration of Quinine," says that malarial fever is very common on the east side of Cayuga Lake, and every year brings its full complement of cases. Within the past few weeks he has seen several cases of scarlatinous eruption appear on patients who were attacked with malarial fever, some of whom had, others had not, taken one particle of quinine. So far as his observations went, which during the past three years has extended over many cases, quinine does not appear to cause the erythema mentioned. He thinks the correspondent was fortunate in having so mild a case which was controlled by twenty-three grains of quinine in forty-eight hours. He has frequently given twenty grains quinine in solution, and then had to repeat the amount to "break the chill." It is not common to see the erythema follow these large doses. The erythema, eruption, and pruritus subside without treatment in a short time. There are no cases of scarlatina in that vicinity.

Retirement of Langenbeck.—Professor Langenbeck is soon to retire from his Professorship in the Medical Faculty of Berlin. His retirement is heralded by expressions of regret from every quarter. Langenbeck is not only the Nestor but the most genial and popular of German surgeons. He numbers among his pupils a large number of the most celebrated German surgeons. Professor Langenbeck, though seventy-one years of age, has still a sure hand and an unusual elasticity of mind and body.

Omental Hernia.—Dr. Meigs Case, of Oneonta, N. Y., writes: "Referring to Dr. Little's case, noticed in a late issue of The Record, I beg leave to mention a recent case.

"Mrs. Warrenchase, of Colliersville, applied to me March 22d, with a strangulated omental hernia at the umbilicus.

"I operated March 26th, removed by incision the

hernial sac, a piece of omentum 7¼ ounces in weight, and returned the gut, 5½ inches of small intestine, very much inflamed and discolored.

"The external incision, 10 inches in length, is nearly healed, and her recovery assured."

Aiding the Expulsive Effort in Parturition.—Dr. D. H. Jervis, of Lone Pine, Penn. writes: "I will communicate a method that I have been practising for some time in cases where there is a deficiency in the contractions of the uterus and the expulsive effort is wanting, in those cases of confinement where labor is prolonged by inefficiency of the contraction of the uterus and the expulsive effort where the os is completely dilated or dilatable, or exactly that class of cases for which our text-books recommend the administration of ergot. I formerly followed the orthodox practice of giving ergot in those cases. But the administration of this drug was so frequently followed by nausea and vomiting that I disliked very much to administer it, knowing the fact that when the head of the child begins to press upon the perineum, the 'expulsive effort' is not only increased, but also the force of the contractions of the uterus. And also the effort of introducing the hand into the vagina in order to explore more fully an unsettled position, has a tendency to influence the character of the labor, very likely producing a rapid delivery.

"From these facts I was led in this class of cases to imitate the pressure produced by the head of the child, by introducing at least a part of the hand and during a pain distending the vagina and making firm pressure outward against the perineum.

"This seldom fails not only to increase the contractions of the uterus, but will bring on a strong expulsive effort. The soft parts being more abundantly supplied with nerves than the walls of the pelvis, the reflex action set up by pressure on them is much greater. In the delivery of the placenta, where it does not come down sufficiently to be grasped by the hand, it may also be hastened by gently distending the vagina. I do not see why, in cases of moderate hemorrhage, contractions might not be brought on by the same method. With this latter I have not had sufficient experience to speak with any assurance. If this method has ever been written on before, I have failed to come across it. And I would be pleased to hear from other practitioners on the subject."

Scraps from the History of Small-Pox in the Times of Louis XIV.—Dr. John C. Peters, of New York, sends us the following interesting items from the original letters of Madame Charlotte Elizabeth, of Bavaria, Duchess of Orleans, written from 1715 to 1720. We gather the following details showing the prevalence and horrible ravages of small-pox among the most beautiful women and exalted men:

"The Duchess de Berry does not require rouge, for she has naturally a high color, for which she is very often bled, but that does not make the least alteration. She wears rouge nevertheless to conceal the marks of small-pox.

"Frances Mary, Duchess of Orleans, wife of the Regent, appears older than she really is, and the small pox has given her a shaking of the head like an old woman. She is not handsome, and puts on too much rouge to hide the marks.

"Madame, daughter of Louis XIV., has her mouth drawn to one side from ulcers on her neck, caused by suppurating glands from small-pox. When she was dying the convulsions brought her mouth right, yet she could not speak, or say a word to her father.

"When I first came here, Madame —— was a most beautiful woman. When she lost her beauty from small-pox, she was quite desperate and almost out of her senses. Her beautiful nose has become large and covered with pimples; her face is scarred and mottled red and white, while the enamel with which she plastered her face, cracks and will not keep on. Her eyes are hollow and sunk in her head. I never in my life saw so great an alteration in a person, and the horrid effect is not to be imagined; it can only be realized by seeing her.

"Mademoiselle de Valois, married to the Prince of Modena, told me that she was going to the convent at Chelles to take leave of her sister, the Mademoiselle de Chartes. I advised her not to go, as the small-pox has been very lately in the convent, and the abbess herself has had it, or the measles, and these disorders are too easily caught. I told her to take care what she did, as her death might be the consequence. In spite of this advice she went and spent the day with her sister, and ten or fourteen days after she was taken ill and soon the small-pox spots appeared.

"When the first Dauphin had the small-pox I went to the king, who said to me, smiling: 'Well, Madame, notwithstanding your terrible apprehensions and forebodings the turn of the Dauphin's disorder is already over and the pimples are drying up' I was much alarmed at hearing this, and said, 'So much the worse; it is too soon.' The king replied, 'You seem to know better than all the great physicians.' 'I know,' I answered, 'what small-pox is from my own experience on myself and among others. I wish sincerely I may be wrong.' The Dauphin died the same night about twelve of the clock.

"I must be very ugly, for I am marked with the small-pox and have not one feature in my face that is passable. I am short in stature and very clumsily made, so that upon the whole I must be a fright. My eyes are so drawn up that if any one attempted to judge of my understanding by them he must have a microscope to examine them. I believe there are not in the whole world uglier scarred hands than mine. The king often told me so and diverted me by it, for as I never flattered myself that I was handsome, I was determined to be one of the first to laugh at my own imperfections. It was very well I did, for I have found frequent occasion to do it. If my disposition was not tolerable I should not be supportable."

The great good sense and wit of the Duchess was well exemplified when she was urged to forgive one who had been guilty of a thousand impertinences to her. After a moment's hesitation she replied: "Well, as she has never called me ugly, I will forgive her."

American Neurological Association. — The eighth annual meeting of this association was held in the hall of the Academy of Medicine, 12 West Thirty-first Street, New York, on June 21st, 22d, and 23d. There were afternoon and evening sessions. These were well attended by the profession, and the papers read were of the usual interesting character. A reception given to the association by its President, Dr. William A. Hammond, on Thursday evening, was largely attended. A report of the proceedings will appear in a subsequent number.

INDEX.

A

Abbe, Dr. Robert, drainage-tube in chest, resection of rib for its removal, 172.
Abdomen, gunshot wound of, 64.
Abscess, emptying into the cæcum, 107; hepatic, 662; of brain, 296; of the neck and mediastinum, 471; of the orbit, 550; pelvic, 107; traumatic of the liver, 470.
Acetonuria, 67.
Acid, boracic, in skin affections, 129; poisoning by, 461; carbolic, internal use of, 513; in the treatment of hydrocele and serous cysts, 13; poisoning by, from Listerian dressings, 67; carbonic as a poisonous product of digestion, 112; hydrobromic in fever, 251; salicylic and heart affections, 66; delirium of, 456; in rheumatism, 289; prophylactic, value of in yellow fever, 476.
Aconitia, 165.
Adams, Dr. E. A., notice of death of, 196.
Adams, Dr. William, notice of book by, 466.
Adulterations, war against, 379.
Æsthetics, medical, 449.
Agnew, Dr. C. R., freedom in consultations, 523.
Agricultural Department, 576.
Air, from the North Pole, 368.
Air-passages, diphtheritic ulcerations of, 442.
Alabama Medical Association, 557; State examinations in, 388.
Albert and Billroth, 448.
Albinismus, 583.
Albuminuria, transient, in children and adolescents, 17.
Alcohol, as an anæsthetic, 203.
Allen, Dr. Almon S., pharmacodynamics, 474.
Allingham, Dr. William, notice of book by, 295.
"Allopath," 650, 658.
Ambulance system, American, 72, 350.
American Academy of Medicine, 487.
American Journal of Neurology and Psychiatry, 363.
American Medical Association, 501, 645, 674; and the Medical Society of the State of New York, 669; and the New York Code, 574, 645, 683; commutation rates, 587, 602; report of proceedings, 648.
American Medical Editors' Association, 670.
American Neurological Association, 686.
American Red Cross Society, 353.
American Surgical Association, 643.
American Veterinary College Prizes, 363.
Ametropia, in etiology of blepharitis ciliaris, 399.
Ammonia, carbonate, is it a stimulant? 95
Amputation, periosteal preservation in, 469; Tripiers of the foot, 402.
Amyl, nitrite of, and chloroform, 335; nitrite of, in hour-glass contraction of the uterus, 488; in infantile convulsions, 582; in tinnitus aurium, 41.
Amyloid degeneration, 489; kidney without albuminuria, 68.
Anæmia, condition of the eyes in fatal, 630.
Anæsthetic, alcohol as an, 203; mixtures, 251.
Anæsthetics, death from, 223; from a medico-legal point of view, 235.
Anchylosis, of the hip, 660.
Aneurism, clot in, 263; of the common carotid artery, 551; of the common femoral artery, 33; of the heart, 551; of the mitral valve, 358; of the pulmonary artery associated with a cavity in the lung, 56; of thoracic aorta, 66; varicose, 200.
Animals, inoculation of, with venereal matter, 288; resuscitation, after exposure to cold, 489; things that occur in, 475.
Ankle-joint, exsection of, 327.
Anthropometrical laboratory, 491.
Antipyretic, treatment, 612.
Antiseptic medication, 259.
Antiseptics, in ocular surgery, 69; relative power of, 614; uselessness of, in ocular surgery, 503.
Anti-vaccism, 323.
Antrum, tumor of, 216.
Anuria, nephrolithotomy for, 631.
Anus, artificial, operation for, 662, 663.
Appendix vermiformis, perforation of, 108.
Arlt, Professor, 616.
Army, forced retirement from, 44; report of the surgeon general of the, 159.
Arsenic, bromide of, in diabetes, 321; necrosis from, 678.
Artery, carotid, convulsions following the ligation of the, 232; carotid, prolonged compression of, as a therapeutic agent, 173; pancreatic, erosion of, 411; pulmonary, aneurismi of, with phthisical cavity, 56.
Arteries, coronary, effect of occlusion of on the heart, 208; torsion of, 641.
Arthritis, gouty, 612; in a dog, 623.
Arthropathy, spinal, 180.
Aspiration, of the knee-joint, 370, 384.
Association for the Advancement of Medical Research, 447.
Association of Asylum Superintendents, 670.
Asthma, euphorbia in, 503; grindelia robusta in, 516; Leyden's crystals in etiology, 613; quebracho in, 67; relation of to nasal polypi, 544.
Asylum, insane, at Utica, 80; insane, management of, 325.
Asylums, obstacles to abolition of mechanical restraint, 230; our city insane, 673.
Ataxia locomotor, 242.
Atkins, Dr. F. H., calcium sulphide, 526.
Atrophy of the lung, 105, 583.
Atropine, poisoning by, treated by morphine, 375.
Auditory canal, extraction of glass from the, 229.
Auricles, tubercular syphilides in, 607.
Avena sativa, 192.

B

Baby, a ten-ounce, 648.
Bacillus lepræ, the, 573; of typhoid fever, 28; of tuberculosis, 684.
Back-rest, 112.

Bacteria, 138; and respiration, 558; in leprosy, 630; none in diphtheria, 150.
Bacterium, special, of pemphigus, 28.
Barrows, Dr. Chas. C., the delirium of salicylic acid, 456.
Ballery, Dr. G. H., ovariotomy abroad, 524.
Barry, Dr. Robert A., notice of death of, 55.
Baruch, Dr. S., a plea for improved vaccination, 1.
Bath, Turkish, for horses, 361.
Baths for the newly born, 595; sponge, for children with bowel affections, 680.
Beadle, Dr. Edward L., notice of death of, 420.
Beard, Dr. Geo. M., monohypochondria and monomania, 313, 505; the moral character of trance subjects, 81.
Beef-juice, 165.
Belladonna, in whooping-cough, 262.
Bellevue Hospital, 66, 261; Medical Board of, 559.
Bellevue Hospital Medical College, commencement, 336.
Bennet, J. Henry, laceration of the cervix, 473; rejoiner, 555.
Bernard, Claude, 362.
Beyer, Dr. H. G., case of varicose aneurism, 200.
Bigelow, Dr. Horatio P., some points in the study of insanity developed by the Guiteau trial, 62.
Billroth, 163; and Albert, 448.
Births and deaths in New York City, 168.
Bismarck, as a patient, 168.
Bitters, analysis of, 616.
Bladder, carcinoma of, 48; diagnosis of tumors of, 558; diphtheritic cast of, 301; gangrene of, 302; lacerated, 326; papillary growth in, 460; paracentesis, of, 289; spasm at the neck of, 383, 414.
Bliphoritis ciliaris, from ametropia, 399.
Block, Dr. J., osteitis of the femur, 485.
Blood, condition of, in chlorosis and pregnancy, 179; effusions of, at the fold of the elbow, 69; scarlatinal, 409.
Blood-corpuscles, new, 223; red, numeration of, 43.
Blood letting, action of local, 575.
Board of Examination, State, 162.
Bodenhamer, Dr. Wm., the treatment of hemorrhoids, 509, 537.
Bone, removal of a splinter of, from the larynx, 584.
Borax, in surgery, 280.
Boro-glycerine, 644.
Bosworth, Dr. F. H., 530; study of nasal catarrh, 617.
Bouley, M., 221.
Bovine virus, a plea for, 388; communication of contagious diseases by, 463; 644.
Bowel affections, in children, 679.
Bradley, Dr. Wm. L., ante-partum hour-glass contraction of the uterus, 569.
Bradner, Dr. W. B. Florida as a health resort, 53.
Brain, abscess of, 296; a large, 557; cortex and cranial surface of, 603; electric excitability of cortex of, in hypnotic persons, 476; longitudinal white line in the cortex, 216; of criminals, 459, 519; of the cat for anatomical study, 531; sarcoma of, 381, 496.
Bread, prepared with sea-water, 140.
Breast, carcinoma of, influence of operations upon, 100.
Brewer, Dr. E. P., on the limit of skin vitality, 483.
Brewer, Dr. George E., reduction of backward dislocation of radius and ulna, 374.
Bridges, Dr. Robert, 307.
Bright's disease, 251, 612; early diagnosis of chronic, 521; gastric lesions in, 403; specifics for, 361.
Brock, Dr. Hugh W., notice of death of, 558.
Bromine, disinfection by, 615.
Bronchi, dilated, quebrache in, 27.
Bronchitis, grindelia robusta in, 516.
Broncho-pneumonia, 80.
Brown, Dr. John, notice of death of, 556, 648.
Brown, Dr. N. F., hydrangea arborescens, in renal calculus, 39.
Brown, Dr. W. Symington, notice of book by, 465.
Browne, J. Crichton, a word for truth, 23.
Brown-Séquard, on general or local contractures after death, 235.
Buboes, abortive treatment of, 616.
Buffon and Bonnet, 113.
Bulbar paralysis, cured, 402.
Burke, Martin, "Freedom in Consultations," 585.
Burr, Dr. Geo., simultaneous fracture of both clavicles, 500.
Burrall, Dr. F. A., chloroform and nitrite of amyl, 335.

C

Cadmium, sulphate of, in corneal opacities, 139.
Calcium sulphide, 526; as an anti-suppurative, 472; in strumous ophthalmia, 138.
Calculus, renal, hydrangea arborescens, 39; vesical, a bean the nucleus, 138; vesical, 580; in the female, 319.
Canal, external auditory, wax in, 503.
Cancer, Chian turpentine in, 168, 177; of the rectum, 438; resection of stomach for, 433.
Cane-sugar and grape-sugar, 613.
Carcinoma, of the bladder, 48; of the breast, influence of operations upon, 100; of the pharynx and larynx, 551.
Canula, dangers from, in tracheotomy, 517.
Carbonic dioxide, effect upon the exhalation of, by section of the pneumogastric, 544.
Carbuncles, 281, 496, 626, 630.
Caries, spinal, 623.
Carnification, of the lung, 47.
Carroll, Dr. Alfred L., 420, 447; consultation with irregulars, 276.
Cartilage, recent experiments with, 45.
Cartilages, floating in the knee-joint, 78.
Cartwright Lectures, 83, 85, 113, 141.
Case, a curious, 130.
Castle, Dr. F. A., neglected pessaries, 52.
Castration, and spurious hermaphroditism, 306.
Cataract, congenital, 458; extraction of, 169; senile, 458; traumatic, 459.
Catarrh, chronic nasal, surgical treatment of, 861, 581; study of nasal, 617, 669.
Cate, Dr. William Mellen, notice of book by, 353.
Cathartics, hypodermically, 386.
Catheter, fracture of, in the urethra, 134.
Catheterization, syncope from, 27.
Cats' hairs, styptic action of, 138.
Caulophyllum thalactoides, 108.
Cautery, actual, use in medicine, 493, 578.
Cellulitis, pelvic, with abscess, 108.
Cellulose, 625.
Centigrade and Fahrenheit, 502.
Central College of Physicians and Surgeons, 364.
Central cortex, functions of, 407.
Cervix uteri, laceration of, 155, 222, 473, 555; stenosis of, 108.
Chancre, excision of, 643.
Charcot's joint disease, 180.
Charity Hospital, officers, 55.
Charity Organization Society, 265.
Charity, organization of, 380.
Chase, Dr. Meigs, 685.
Cheesman, Dr. W. S., heart-lesions in rheumatic fever, 202.
Chian turpentine, in cancer, 168.
Chicago Medical College, 643.
Children, bowel affections in, 679.
Children's cottage hospitals, 448.
Chinolin, 311; in whooping-cough, 519.
Chloroform, and the nitrite of amyl, 335; death from, 70, 228; effect of, upon the nervous centres, 544; frequent cause of death from, 433; impure, 433.
Chlorosis and pregnancy, condition of blood in, 179.
Cholelithectomy, 662.
Cincinnati Academy of Medicine, 384.
Cincinnati Medical Society, 385.
Circulation, central, 544.

Circumcision, and a contracted meatus, 308; for the correction of spasm of the ciliary muscles, 9.
Clavicle, treatment of fracture of, without apparatus, 230, 391; treatment with wire sutures, 543; "backcling" for fractured, 572, 670.
Clavicles, fracture of both, 500.
Clinocephalus, 616.
Clitoris, elephantiasis of, 52.
Clot, fibrinous, in an aneurism, 263.
Clothes, saliva spots in, 168.
Coccyx, new method of removal of, 180.
Code, of Medical Ethics, 163, 166, 182, 548, 558.
Codeia, and morphia, 362.
Cohosh, blue, the tincture of the root, 108.
Cold, dry, in the reduction of temperature, 400.
Colic, lead, 503
Color-blindness, 683.
Columbia Veterinary College, 390.
Comings, Dr. A. F., universal knife, 613.
Compression, instrumental, of the carotid as a therapeutic agent, 173.
Congress, German, for internal medicine, 612.
Conium, 165.
Conjunctiva, croup of, 63, 187; diphtheria of, iodoform in, 682.
Connecticut Medical Society, 635.
Consultations, freedom in, 378, 434, 520, 523, 585; the question of medical, 162; with irregulars, 276.
Consumption, local antiseptic treatment of, 285.
Contagious diseases, 1881, 83.
Contractures, general or local, after death, 235.
Convolutions, cerebral, mathematical, 28.
Convulsions, following ligation of the carotid artery, 232; infantile, nitrite of amyl in, 582; in resuscitated children, 504; puerperal, 224, 251, 405.
Cook County Hospital, 66, 420.
Copper, sulphate of, poisoning by, 564.
"Corked" ether cans, 73.
Cornea, opacity of, sulphate of cadmium in, 139.
Corning, Dr. J. Leonard, prolonged instrumental compression of the primitive carotid artery as a therapeutic agent, 173.
Coroner, reform in the system, 646.
Corrigan, Dr. J. F., antiseptic medication, 259.
Cox's, Judge, charge to the jury, 130.
Cramer, Jennie, murder of, 462; amount of arsenic in body, 559.
Cranium, congenital malformation of, 300.
Crede's method, 361.
Cremation, 56.
Croup, care of trachea after tracheotomy for, 342, 355; jaborandi in, 42; of the conjunctiva, 187, 631; papai-juice in, 611.
Crothers, Dr. T. D., curability of inebriety, 174.
Curara, artificial, 516; in hydrophobia, 404.
Curvature, sacro-lumbar, 337, 559.
Cutter, Dr. Ephraim, organism in the Croton water, 365.
Cyst, dermoid, of the ovary, 82; of the pancreas, 46, 358.
Cysticerci, in the brain, 56.
Cystitis, 177, 196.
Cysto-adenoma, of the thyroid, 105.

D

Dalton, Dr. John C., Buffon and Bonnet in the eighteenth century, 113; nervous degenerations and the theory of Sir Charles Bell, 141; the experimental method in medical science, 85; notice of book by, 239.
Darwin, death of, 464.
Dawson, Dr. W. W., treatment of fracture of the clavicle with wire sutures, 543.
Deafness, in school-children, 265.
Dean Swift, 413.
Death, recognition of, 640; sudden, from forced depression of the tongue, 288.
Death-rates, in 1880, 420.
Deformities, genesis of certain hereditary, 514.
Degeneration, amyloid, 489.
Delirium of salicylic acid, 456.
Dental engine, modified, 488.
Dentistry, as a specialty, 362; mercury in, 678.
Dentists, education of, 679.
Dermatolysis, 304.
Dermatosis, acute, 140.
Diabetes, 213; and malaria, 112; bromide of arsenic in, 321; complicated by endocarditis, 515; hepatic affections in their relations to, 288; origin of, 154; pathognomonic symptoms, 224; peritonitis, alveolar in, 288; surgical operations and their relations with, 154; uricæmia a premonitory symptom, 515.
Diastasis of the condyloid epiphysis of the femur, 600.
Digitaline, 476; effect upon the heart, 440.
Digitalis, viscum album a substitute for, 83.
Diphtheria, 289, 459, 517; and erysipelas, 209; and pet animals, 252; condition of the heart in, 557; eczema and erysipelas, 27; experimental studies regarding the nature of, 264; in calves and pigs, 460; iodoform in, 447; nasal, 80; no bacteria in, 150; of the conjunctiva, 187, 682; paralysis of the larynx in, 683; the false membranes of, 398; treatment of, 435.
Diploma, manufacture in Detroit, 167.
Diplomas, American, in Australia, 448.
Disease, connection between cardiac and renal, 181.
Diseases, contagious, and pet animals, 252; contagious, in 1881, 83; of the middle ear, treatment of, 57, 75.
Disinfectants, uselessness of some of our ordinary, 325.
Dislocation of the knee, 303.
Dispensary, the Northwestern, 528.
Displacements, uterine, 273.
Dissecting-room, non odorous, 224.
Doctors' fees in London, 518.
Doctors, in Belgium, 28; migratory, 642; village, 531.
Doliarina, 56.
Dosage and administration, 311, 362.
Douche, vaginal, 273.
Dowell's method for the radical cure of hernia, 234.
Drainage of knee-joint, 662.
Drainage-tube, resection of rib necessary for its removal, 172.
Draper, Dr. John W., notice of death of, 55.
Druggist, responsibility of a, 685.
Drugs, actions of, 468; measurements of, 671.
Duboisia, poisoning by, 263.
Ductus arteriosus, 439.
Dwight, Dr. Thomas, notice of book by, 268.
Dyspepsia, among our farmers, 183; salicylates in, 677; tachycardia in, 601.

E

Ear, diseases of the middle, treatment of, 57, 75; insects in, removal of, 154; suppuration of the middle, iodoform in, 336; wax in, 503.
Earache, in children, 644.
East River Medical Association, 140.
Eating, before sleeping, 502.
Eclampsia, morphine in, 251; puerperal, 405.
Ectropion, treated by transplantation, 252.
Eczema, diphtheria and erysipelas, 27; viola tricolor in, 449, 467.
Edis, Dr. Arthur W., notice of book by, 354.
Educational reform, and the Harvard Medical School, 159.
Effusions, of blood at the fold of the elbow, 69.
Elbow, backward dislocation of, 374; exsection of, 553; fracture of, 443.
Electric current, common mistake in the selection of, 493; in surgery, 659.
Electric light, hygienic value of, 284.
Electrolysis, in enlarged prostate, 306; on the treatment of wine-marks, 188; for permanent removal of hair, 253, 275.

Electro-therapy, in opacity of the vitreous body, 42.
Elephants, breeding and diseases of, 492.
Elephantiasis, of the clitoris, 52; parasites in, 12.
Ellis, Dr. George Viner, notice of book by, 16, 294.
Ely, Dr. Edward T., diseases of the eye arising from affections of the teeth, 258; iodoform in suppuration of the middle ear, 336.
Embolism, cerebral, on the right side, 261.
Emphysema, quebracho in, 27.
Emplastrum, plumbi, adhesivum, belladonnæ, aconiti, etc., 348.
Enchondroma, laryngeal, 233.
Endocarditis, complicating diabetes, 515.
Enteritis, tubercular, 410.
Epidemics, prevention of, 665.
Epilepsy, hemi-, 51; trephining for, 571.
Epipeocele, incarcerated femoral, 105.
Epistaxis, cat's hair for, 138; intermittent, 541.
Epithelioma, 298; of the cervix uteri, pregnancy with, 106.
Ergot, in lead palsy, 13; in pharyngitis, 476; therapeutical indications for, 420.
Ergotine, in erysipelas, 83.
Eruptions, cutaneous, caused by certain medicines, 152.
Erysipelas, and diphtheria, 209; cervical, 485; diphtheria and eczema, 27; ergotine in, 83.
Erythema, nodosum, 626; scarlatinous, following the use of quinine, 627, 685.
Eserine, in acute glaucoma, 193, 318.
Esmarch, constrictor, 554.
Ethics, medical, a question of, 502; in China, 417; code of, 163, 166, 182, 548; in consultations, 558.
Encyclopædia of Surgery, the International, notice of the first volume 73.
Examinations, State and legal qualifications, 111.
Excision of the elbow, 553; of the humerus, 553; of the knee, 405.
Exostoses, congenital, 69; of the popliteal region, 121, 133, 302.
Extracts, meat, 27.
Extractum carnis, 98.
Eye, communicable diseases of, 683; condition of in fatal anæmia, 630; disease of, from disease of the teeth, 258; foreign bodies in, 263, 583.

F

Factory children, 163.
Fahrenheit and centigrade, 502.
Fat, digestion and absorption of, 209.
Fecundation, predilection for, 588.
Felton, Dr. Lucius E., medical induction coils, 125.
Femur, diastasis of the condyloid epiphysis of, 600; fracture of, 404; osteitis of, 485; subcutaneous section of, 189, 660; ununited fracture of, 661.
Fever, puerperal, parotitis in, 289; pyrexia in, 533; recurrent, simultaneous with measles and typhus, 487; rheumatic, heart-lesions in, 202; remittent, with peculiar pulse-rate, 588; scarlet, 459; simple continued, 196; temporary, after simple fractures, 153; typhoid, 459, 462; and polluted well-water, 168; hemorrhages in, 129; phlebitis in, 545; tepid baths in, 461; typhus with measles and recurrent fever, 487; yellow, 558; salicylic acid in, 476; tissue, changes in, 612.
Fevers, antipyretic treatment of, 673; the hæmic crisis in, 267.
Fibrin, the formation of, 633.
Fibroma, of abdominal wall, 410; of Scarpa's triangle, 32.
Fibroma, of the tonsil, 296.
Fibro-myxo-sarcoma, of the larynx, 79.
Fibro-sarcoma, of the ischium, 302.
Filaria sanguinis hominis, and chylous urine, 129.
Fissura, calcarina, 216, 360.
Fissure, anal, iodoform in, 390.
Fistula, anal, 417; in the anterior portion of the urethra, 244.
Fistules, congenital in the lumbo-sacral region, 545.
Flexion, extreme uterine, 108.
Florida, as a health resort, 53.
Flower, "Dr." Richard C., 503.
Flukes, in the human liver, 56.
Flynn, Dr. J. W., atropine poisoning successfully treated by morphine, 375.
Foot, Tripier's amputation of, 402.
Forceps, new obstetric, 277, 664.
Forearm, sarcoma of, 246.
Fothergill, Dr. J. Milner, notice of book by, 267.
Fox, Dr. Geo. Henry, the permanent removal of hair, 253.
Fracture of os hyoides, 396; of the sternum, 301; of the thigh, 404.
Fractures, plaster-of-Paris in the treatment of, 11; temporary elevation of temperature after, simple, 153.
Frantz, Dr. John H., death of, 308.
French, Dr. J. M., erythema following the use of quinine, 627.
Freund, Prof., 167.
Friedrich, Dr. Karl, 420.
Fritsch, Dr. H., notice of book by, 133.
Fuller, Dr. Robert M., a convenient method of dosage and administration, 311, 332.
Fuller's tablets, 530.
Furnucles, 281, 496.

G

Gall-stones, detection of, by the exploring needle, 568.
Galvani and galvanism, 85.
Gangrene, of the bladder, 302; from injury of the ulnar nerve, 560.
Garrigues, Dr. Henry J., anatomy and histology of cyst of the pancreas, 286; ineffective vaccine virus, 347, 418.
Gastroscopy, 83.
Gastrotomy, successful, 83, 250, 307.
Geddings, Dr. W. H., report of cases of phthisis, 4, 34.
Gelsemium, death from, 65.
Genu-pectoral posture, 186.
Gibney, Dr. V. P., the sequelæ of measles, 589, 606.
Glaucoma, acute, cured by eserine, 193; acute in a myopic eye, 318; eserine in, 318.
Glossograph, 604.
Glycosuria, quinine in, 544.
Goitre, in the lower animals, 615; treated by excision, 94.
Gonorrhœa, 139; non-specific, 29; with gangrene of the bladder, 302.
Graham, Dr. A. C., acquired monorchidism, 509.
Grainger, Dr. W. H., a new obstetric forceps, 277.
Grape-sugar and cane-sugar, 613.
Gray, Dr. John P., 362.
Gray, Dr. Landon Carter, reflex disturbances from genital irritation, 136; rejoinder to Dr. Shaffer, 250.
Green, Traill, the higher medical education, 527.
Greenhill, Dr. W. A., notice of book edited by, 353.
Gregg, Dr. Rollin R., no bacteria in diphtheria, 150; the false membranes of diphtheria, 398.
Griffe, de la main, 136.
Grindelia robusta, in asthma and bronchitis, 516.
Gross, Dr. Samuel D., 391.
Guiteau, a day with, 21; the responsibility of, 46.
Gunn, Dr. J. H., State examinations in Alabama, 388.
Gymnasts, pulmonary, 28.

H

Hæmoglobine, 514.
Hæmoglobinuria, paroxysmal occurrence, 488, 564.
Hager, Dr. Hermann, notice of book by, 294.
Hair, permanent removal of, 253, 275.
Halderman, Dr. Davis, diastasis of the femur, 600.
Hall, Dr. A. L., death from gelsemium, 65.
Hamilton, Dr. Allan McLane, notice of book by, 267; word-blindness, 609.

Hamilton, Gail, on the spent bullet, 464.
Hanging, pathological changes in death by, 436.
Hamsin, Dr. J. M., a device for laryngoscopic practice, 304.
Harrison, Dr. Reginald, notice of book by, 133.
Hart, Dr. Charles A., uræmia in an infant due to elongation and contraction of the prepuce, 65.
Harvey, Dr. P. F., intermittent epistaxis, 541.
Head, injuries to the, 234.
Hearing, defective in children, 482.
Heart, aneurism of, 551; effect on by occlusion of coronary arteries, 208; eccentric hypertrophy without valvular lesion, 381; weighing 13 ounces, 216.
Hematocele, pelvic, 416.
Hemiplegia, a case of, 592, 609; malarial, 280; observations on, 452, 472.
Hemorrhage, and Nélaton, 685; pharyngeal, 682; umbilical, 377.
Hemorrhages, of typhoid fever, 129; treatment, of due to epithelioma of the womb, 75.
Hemorrhoids, dilatation of the anal sphincters for, 509, 537; extirpation with the clamp, 631.
Henoch, Dr. Edward, notice of book by, 465.
Hepatitis, interstitial, 216.
Here ity in dental development, 678.
Hermaphroditism, spurious, and castration, 396; in a hog, 670.
Hernia, Dowell's method for radical cure, 234; Heaton's operation for radical cure of, 349; irreducible and strangulated treated by morphia hypodermically, 514; muscular, cured by Martin's bandage, 15; omental, 685; omental, of the tunica vaginalis, 357; strangulated umbilical, 301.
Hinsdale, Dr. Guy, hospital report, 177, 232, 319, 569.
Hip, anchylosis of, 660.
Hoang-nan, in the treatment of rabies, 515.
Hodgen, Dr. John T., obituary, 529.
Holden's osteology, 294.
Homatropin, in phthisis, 437.
Homœopathy, 205.
Hospital examinations, 326.
Hospital, for the miners, 517; Garfield memorial, 548; medical missionary, 498; of the University of Pennsylvania, 177, 319, 232, 569; Saturnday and Sunday association, 56; officers, 128; the fund, 112; distribution, 223.
Hospitals, children's cottage, 448; lunatic, 138; origin of, 504; special, 163; special for scarlet fever and diphtheria 359.
Houston, Dr. Thomas F., antagonism of opium and veratrum viride, 52.
Hubbard, Dr. Fred. Theman, notice of book by, 520.
Hueter, Prof. C., notice of death of, 684.
Humerus, exsection of the head of, 553; necrosis of the upper part of the shaft of the, 498; transplantation of, 288.
Hunt, Dr. S. H., relaxation of dorsal muscles, hernia, cystitis and convulsions due to contracted prepuce, 194.
Hydrangea arborescens, in renal calculus, 39.
Hydrocele, 67, 301; treatment of by the injection of carbolic acid, 13.
Hydronephrosis, 383, 477, 496.
Hydrophobia, 129, 179; curara in, 404.
Hydro-salpinx, 155.
Hygiene, International Congress of, 684; National Museum of, 55; of schools, 167; oral, 677.
Hyoscine, hydriodide of, as a mydriatic, 403; physiological effects of, 208.
Hyperhydrosis, general neuroparalytic, 68.
Hypnotism, 42, 73, 572.

I

Ice, impure, 639.
Illumination, electric, applied to physiological demonstrations, 68.
Illustrated Quarterly of Medicine and Surgery, 362.
Immersion, recovery from prolonged, 77.
Incontinence, of urine in children, 261.
Induction, balance, detection of lead bullets by, 307; coils, medical, 125.
Inebriety, curability of, 174.
Infant feeding and infant foods, 189.
Infants of the poor, and the State Medical Society, 14.
Infarction, pulmonary ruptured, 303.
Inoculation, as a protection against malignant pustule, 514; of animals with venereal matter, 288.
Inoculations, protective, 634.
Insane, association for the protection of, 44; chronic, pauper, 575; national association for the protection of the, 109; Senate report on the management of, 325; what lunatics think concerning the responsibility of the, 587.
Insanity, humane treatment of, 390; some points in the study of, 62; the question of moral, 99.
Insects, removal of, from the ear, 154.
Instrument manufacturers, council of, 588.
Insufflation, of medicated powders with the upper air-passages, 191.
Intestinal obstruction, 135, 299, 328, 427, 431, 434, 443, 580, 616, 659.
Intestines, strangulation of with rupture of the omentum, 11.
Intussusception, laparotomy for, 299.
Iodine, in acute malaria, 250; in malignant pustule, 433; in syphilis, 269.
Iodoform, 223, 362, 448, 543; as a dressing, 513; era of in surgery, 97; in anal fissure, 390; in British hospitals, 401; in diphtheria, 447; diphtheretic conjunctivitis, 682; in gynecological practice, 217; in suppuration of the middle ear, 336; value of as a dressing for wounds, 309, 324.
Iodoform-poisoning, 404.
Iowa State Medical Society, 334.
Ipecacuanha during labor, 601.
Iridectomy, 458.
Irritation, genital, reflex disturbances from, 53, 136, 193, 250, 419; reflex, producing symptoms of stone in the bladder, 29.
Iron, muriated tincture of, administration, 41; preparations of, 168.
Irregulars, consultation with, 276.
Ischium, fibro-sarcoma of, 302.

J

Jaborandi, in croup, 42.
Jackson, Dr. Geo. T., erythema nodosum, 626.
Jarvis, Dr. Wm. C., 155; surgical treatment of nasal catarrh, 561.
Jervis, Dr. D. H., expulsive effort in parturition, 686.
Jefferson Medical College, 392.
Joints, operations upon diseased, in phthisical subjects, 129.
Jones, C. Hanfield, F.R.S., clinical lecture on paraplegia, 421.
Jones, Dr. Nelson E., pyrexia a conservative force in fever, 533.
Jones, Dr. Talbot, nerve-stretching, 499.
Judkins, Dr. Wm., aspiration of the knee-joint, 370.
Junod, Dr., notice of death of, 361.

K

Kales, Dr. J. W., 685.
Kane, Dr. H. H., notice of book by, 267; the phenomenon of partial morphia-narcosis, 54.
Keetley, Dr. C. B., notice of book by, 465.
Kentucky State Medical Society, 500.
Keratitis, malarial, 224.
Kidney, amyloid degeneration of, without albuminuria, 68; fibro-cystic tumor of, 300; primary sarcoma of, 48; extirpation of, 212.

King, Dr. David, notice of death of, 361.
Knapp, Prof. Herman, 476; extraction of cataract, 169.
Knee, dislocation of, 303; excision of, 405; floating cartilages in, 78.
Knee-joint, aspiration of, 370, 384.
Knife, universal, for uterine surgery, 613.
Koch, and tuberculosis, 545, 547; at the German Congress, 603.
Kola nut, 668.
Koumiss, value of, 671.

L

Labor, ipecac during, 601; use of nitrous oxide in, 514.
Laboratory, anthropometrical, 491.
Laceration of the cervix uteri, 155, 473.
Lachrymal apparatus, syphilitic diseases of, 166.
"Lady fever," 139, 251.
Lamson's, Dr., mental condition of, 503; the case of, 465; the trial of, 84.
Langenbeck, 685.
Laparotomy, for acute intestinal obstruction, 427, 434, 443; for intussusception, 299.
LaRoe, Dr. James G., case of fracture of the os hyoides, 396.
Larva of a fly, developed under the skin of the human body, 298.
Laryngitis, phthisical, 215.
Larynx, device for examination of, 304; fibro-myxo-sarcoma of, 79; removal of bone and dental plate from, 584.
Lead-palsy, ergot in, 13.
Lead-poisoning, 331; prevention of, 84.
Lectures, clinical, 112.
Leech-bites, 261.
Leprosy, parasites in, 12, 630; recent studies in the pathology of, 98.
Leucocythæmia, splenic, 672.
Lewis, Dr. Daniel, the treatment of scarlatina, 283.
Licensing of physicians and surgeons, act to regulate, 305.
Light, electric, hygienic value of, 284.
Listerism, and Mr. Keith, 167, 664.
Litholapaxy, 321.
Lithotomy, lateral, 513.
Lithotrity, 263; rapid, in old men, 135, 263; rapid with evacuation, 577.
Liver, abscess of, 662; erectile tumor of, 359; human, flukes in, 56; sarcoma of, 299; surgery of, 662; traumatic abscess of, 470.
Localization, 494.
Locomotives *vs.* malaria, 363.
Locomotor ataxia, condition of cutaneous nerves in, 514; falling of the nails in, 516; nerve-stretching in, 544.
Lumbo-colotomy, as a preliminary measure in imperforate rectum, 154.
Lung atrophy of the, 105; capacity of, 643; carnification of, 47.
Lusk, Dr. Wm. T., notice of book by, 99.
Lymphadenitis, cutaneous, 515.
Lympho-sarcoma of the neck, 323.

M

Maclean, Dr. Donald, notes of two surgical cases, 32.
Macnamara, Dr. C., notice of book by, 295.
Mad-houses, supervision of private, 380.
Maisch, John M., notice of manual by, 353.
Malaria, acute, iodine in, 250; and diabetes, 112; and locomotives, 363; and rickets, 291; influenced by locomotives, 199.
Mann, Dr. Matthew D., 83.
Manhattan Eye and Ear Hospital, 458.
Marine Hospital Service, U. S., 183.
Markoe, Dr. Thomas M., exostoses of the popliteal region, 121, 133.
Martin, Dr. H. A., a case of general eruption of vaccinia, 393.
Mason, Erskine, M.D., obituary, 446; the late Dr. Erskine, 530, 615.
Mason, Dr. Theo. L., notice of death of, 196.
Massachusetts Medical Society, notice of volume, 240.
Mastoid, deep opening of, 584.
Materia Medica, Society, 217, 268, 332, 467; should medical students be taught it, 646.
McClellan, Dr. George, local treatment of carbuncles, 626.
Meadows, Dr. Alfred, notice of book by, 467.
Measles, and scarlatina, simultaneous occurrence, 461; the sequelæ of, 589, 606; with recurrent and typhus fevers, 487.
Meatus auditorius externus, inflammation, 197.
Meatus urinarius, contracted, and circumcision, 308; as a cause of spasm at the neck of the bladder, etc., 383.
Mediastinum, abscess of, 471
Medical acts, 305; of 1880, working of, 588.
Medical Association, Alabama, 557; Mississippi, 557.
Medical charities, bequests, 447; of New York, 363; of Philadelphia, 363.
Medical charity, abuses of, 546.
Medical and Chirurgical Faculty of the State of Maryland, 437.
Medical college, a bogus, 391; Albany, 364; the Miami, 361; of Indiana, 364; of South Carolina, 364.
Medical congress, Spanish, 168.
Medical Department, University of Georgia, 364.
Medical education, 364; the higher, 527.
Medical ethics, code of, 163, 166, 182, 548, 558; in China, 417.
Medical expert testimony, 655, 658, 681.
Medical history of houses, 350.
Medical induction coils, 125.
Medical institution of learning, 72.
Medical journalism in Japan, 476.
Medical legislation, 210.
Medical notes on Asia, 248.
Medical Register, the, 616.
Medical School, the Harvard, and educational reform, 159.
Medical science, the experimental method in, 85.
Medical services, bills for, 15.
Medical Society, British and American, of Paris, 467; Chicago, 476; of New Jersey, 500; of the County of New York, 247, 275, 359, 472, 581; of London, prizes of, 477; of the State of New Jersey, 665; of the State of New York, 131, 161, 184; of the State, and caring for the infants of the poor, 14; of the State of New York, revision of its system of ethics, 220; of the State of Pennsylvania, 548; of Virginia, prize, 362; the St. Louis, and the New York code, 475.
Medical student, the American, 157.
Medical student's primer, 279; women, 195, 685.
Medication, antiseptic, 259.
Medicine, are there schools in? 221; at Foochow, 71; experimental, 186; proprietary, 640; scientific, 162; veterinary, in Germany, 541.
Medicines, in small doses, 531; proprietary, 292, 503; tasting after being introduced into the vagina and ear, 335
Medico-legal Society, 55.
Mendelson, Dr. Walter, Dr. Skinner's case of ruptured pulmonary infarction (?), 303.
Menopause, disturbances of the nervous system coincident with, 272.
Meningitis, basilar, 51.
Mercury, in the treatment of syphilis, 268, 377, 675; in dentistry, 678.
Metcalf, Dr. G. R., 196.
Microcephalus, 616.
Micrococci, recognition of, 368.
Milk, in the propagation of typhoid and scarlet fever and diphtheria, 459; skimmed, 139.
Milk-sickness, 138.

Mills, Dr. T. W., London, 83.
Milne, Dr. T. Clarke, State examinations and legal qualifications, 111.
Milton, Dr. M., petroleum in phthisis, 532.
Mirror, prismatic, for rhinoscopic examinations, 307.
Misery, much, births many, 465.
Mississippi State Medical Association, 557.
Missouri Medical College, 362.
Mittendorf, Dr. W. F., notice of book by, 295.
Mole, sanguineous, 298.
Monohypochondria and monomania, 313, 505.
Monomania and monohypochondria, 313, 505.
Monorchidism, acquired, 509.
Monospasm, trachial, 496.
Monster, double, 298.
Morbus, maculosis, 412.
Morgan, Dr. Wilbur P., surgical needle for wire sutures, 389.
Morphia, and codeia, 362; hypodermically, in strangulated hernia, 514; in poisoning by atropine, 375; in puerperal eclampsia, 251.
Morphia-narcosis, 54.
Mundé, Dr. Paul F., concerning a case of dermoid cyst of the ovary, 82.
Muscles, ciliary, spasm of, 9.
Mydriatic, a new, 403.
Myxœdema, diagnosis of, 262.

N

Nails, falling of in locomotor ataxia, 516.
Naphthol, 448.
National Examining Board, 248.
"Nature's invisible police," 181.
Neck, gangrene of, 69; lympho-sarcoma of, 328.
Necrosis, from arsenic; of the petrous portion of the temporal bone, 585; of the upper part of the shaft of the humerus, 498.
Nephrolithotomy, for anuria, 631.
Nerves, condition of cutaneous, in locomotor ataxia, 514.
Nerve-stretching, 237, 240, 349, 499, 516, 544, 667; dangers from, 252; for disease of the spinal cord, 488; in traumatic tetanus, 247; in infantile paralysis, 545; subcutaneous, 112; the optic, 389.
Nerve suture, 42.
Nervous degenerations, and the theory of Sir Charles Bell, 141.
Nervous system, Galvani and galvanism in the study of the, 85.
Neuralgia, spasmodic, 9; trigminal, 300, 579.
Neuro sarcoma, of the tibial nerve, 298.
Newton, Dr. R. C., treatment of fracture of the clavicle without apparatus, 230.
New York Academy of Medicine, 17, 75, 100, 160, 213, 272, 414, 469, 521, 577; Obstetric Section, 107, 108, 416; section in Practice of Medicine, 493, 609; Academy of Sciences, 364; Medico-Legal Society, 195; Neurological Society, 50, 240, 331; Neurological Society, officers, 420, 587, 643; Opthalmological Society, officers, 84; Pathological Society, 46, 78, 104, 216, 296, 326, 358, 381, 410, 551; Pathological Society, officers, 84; Physicians' Mutual Aid Association, 211; Society of German Physicians, 298, 583; State Dental Society, 556; Surgical Society, 133, 243, 301, 355, 443, 470, 496, 578.
Nitro-glycerine, in cardiac disease, 460.
Nitrous oxide, use of, in labor, 514.
Non-restraint, in the treatment of the insane, 110.
Nostrils, œstrus larvæ in, 262.
Nurses, training-schools for, 634.

O

Œsophagus, laceration of, 471; stricture of, 246, 493.
Œstrus larvæ, in the nostrils, 262.
Obesity, in a child, 223.
Obstruction, intestinal, 135, 299, 328, 427, 431, 434, 443, 580, 616, 659.
Office swindlers, 463.
Oleates, in skin diseases, 549.
Omentum, rupture of, with strangulation of the intestines, 11.
Oophorectomy, 664.
Opacities, corneal, sulphate of cadmium in, 139.
Operations, upon diseased joints in phthisical subjects, 129; surgical, and their relations with diabetes, 154.
Ophthalmia, purulent infantile, 614; sympathetic, division of the optic and ciliary nerves for, 189.
Ophthalmology, the Middlemore prize in, 616.
Opium, and veratrum viride, antagonism of, 52; in intestinal obstruction, 431.
Optic nerve, stretching of, 389.
Orbit, sarcoma of, 104.
Organisms in the Croton water, 365.
Orgasm, the absence of, 127.
Os hyoides, fracture of, 396.
Osteitis, of the femur, 485.
Osteology, human, 294.
Osteoma, of upper jaw, 327.
Ostcophytes, cranial, in congenital syphilis, 235.
Otis, Dr. F. N., clinical lecture, 29.
Otitis media, suppurative, following plugging of the posterior nares, 515.
"Ought I to do it?" 391.
Ovariotomies, 32; consecutive cases, 235.
Ovariotomy, 42, 524; death after, due to preliminary tapping, 257; double, 358; during peritonitis, 665; during pregnancy, 22; vaginal, 433.
Ovary, dermoid cyst of, 82; monocystic tumor of, 289.
Ozone, as a sleep-producing agent, 131; atmospheric, in its relation to disease, 408.

P

"Painted Sickness," of Mexico, 647.
Pallen, Dr. Montrose A., Bennet on laceration of the cervix uteri, 222, 555.
Palmer, Dr. A. B., notice of book by, 604; Dr. B. W., notice of book by, 132.
Pancoast, Dr. Joseph, death of, 307; the late Dr. Joseph, 391.
Pancreas, cyst of, 46, 286, 358.
Paracentesis of the bladder, 289.
Paraplegia, 421.
Paralysis, facial, electrical condition of the muscles in, 493; facial, undescribed sequel, 494; glosso-labio-pharyngeal, 402; infantile, 545; localization of atrophic, 254; of the flexors of the foot, 611; traumatic, of certain nerves, 299.
Parasites, in leprosy of elephantiasis, 12.
Parotitis, metastatic, prognosis in, 167; pyemic, 614; suppurative, in puerperal fever, 289.
Parturient state, general management of the, 225.
Parturition, aiding the expulsive effort in, 686; in the lower animals, 426
Parish, Dr. Wm. H., 476.
Pasteur's germ theories, 571.
Patella, Lister's treatment of fractured, 138; two fractures of the same one, 244; treatment of fracture of, 582; by wiring the fragments, 596.
Pathology, bacterial, 352; vegetable, 83, 518.
Pathological Society of Philadelphia, 167.
Peck, Dr. Edward S., extractions of two pieces of glass from the ear, 229.
Pedestrianism, and the physiology of walking, 238.
Pellets, soluble, compressed for hypodermic use, 321, 332.
Pelvis, obliquity of, and its treatment, 337, 359.
Pemphigus, bacterium of, 28.
Penis, strangulation of, 84.
Perham, Dr. D. W., notice of death of, 558.
Periarchitis, 308.

Pericarditis, hemorrhagica, 331.
Perineal, section, 513.
Peripneumonitis, inoculation in cases of contagious, 68.
Periosteum, preservation of in amputation, 469.
Periostitis, a veolar, in diabetes, 288.
Periostotomy, subcutaneous, 485.
Pertussis, 262, 280; pilocarpin in, 181.
Pessary, anteversion, 273.
Pessaries, neglected, 52.
Peters, Dr. George A., hydronephrosis, 477.
Peters, Dr. J. C., 686.
Petroleum, in phthisis, 532.
Pharmacodynamics, 474.
Pharyngitis, ergot and ergotine in, 476; intermittent, 615.
Philadelphia County Medical Society, 167; and the new code, 504.
Philadelphia Pathological Society, 167.
Phthisis, early indications of, 205; phlebitis, following typhoid fever, 545; homatropin in, 437; in Italy, 139; laryngeal, 56; local antiseptic treatment of, 285; operations upon diseased joints in, 129; petroleum in, 532; report of cases, 4, 54; vomiting in, 611.
Physicians, female, in India, 671; in Russia, 224; race prejudice among Baltimore, 390; who do not read, 560.
Physiology, the, of walking, 238.
Piffard, Dr. H. G., on the viola tricolor, and its use in eczema, 449.
Pilcher, Dr. Lewis S., care of the trachea after its incision for relief of croup, 342, 355.
Pilocarpine, as a stimulant of peristaltic movements, 83; in whooping-cough, 181.
Pirogoff, Prof., notice of the death of, 56.
Pityriasis rubra, 629.
Placenta, "Crede's method" of expelling, 361.
Plaster of Paris bandages, removal of, 384; use of in fractures, 11.
Plasters, medicated, 348.
Plumbing law, 359
Plumbing, practical points in, 160.
Pneumogastrics, 459; effect of section of, 544.
Pneumonia, 261; desquamative, 410; treated by inhalation of sulphuric ether, 258.
Poisoning, chronic carbolic-acid, 291; from canned food, 361.
Poisons, a new comparison of, 671.
Polk, Dr. Wm. M., the general management of the parturient state, 225.
Polypi, nasal, and asthma, 544.
Polypus, naso-pharyngeal, 243; removal by Nélaton's operation, 607, 608.
Pomeroy, Dr. Oren D., acute circumscribed inflammation of the meatus auditorius externus, 197.
Popliteal region, exostoses of the, 121, 133.
Pond, Dr. James Otis, memoir of, 521.
Porro's operation, 376.
Post, Dr. A. C., local treatment of carbuncles and furuncles, 281.
Post, Dr. Geo. E., treatment of intestinal obstruction by opium, 431.
Post-graduate courses, 322; studies, 490.
Potassium, bichromate of, as a cause of disease, 571; chlorate of, 674; in the treatment of syphilis, 351; iodide of, in non syphilitic organic diseases of the nervous system, 50; iodide of, in small doses, 67; salicylate of, in rheumatism, 677.
Poultry, drawn or undrawn, 292, 504.
Powders, medicated for catarrh of the upper air passages, 191.
Præcordia, resection in the, 138.
Practitioners, irregular, 351; Society of New York, 606.
Pregnancy, and chlorosis condition of blood in, 179; and ovariotomy, 22; disappearance of the phosphates in the urine of, 630; extra-uterine, 321; extra-uterine in a quail, 26; ovarian, 28; with epithelioma of the cervix, 106.
Prepuce, contracted in the etiology of convulsions, cystitis, etc., 194.
Prize-fighter, 292.
Professor, the legal position of a, 420.
Progression, cross-legged, 432.
Prolapse, of the urethra, 489.
Prostate, electrolysis in enlarged, 306.
Pruritus, cutaneous, 402; new treatment for, 615.
Pseudo-membranes, solvent for, 80.
Psychrophos, 643.
Pulse-rate, of the isolated mammalian heart, 441.
Purpura hemorrhagica, acute, 412.
Pustule, malignant, hypodermic injections of iodine in, 433; inoculation as a prophylactic measure, 514.
Putzel, Dr. L., a case of hemiplegia, 592, 609.
Pylorus, excision of, 643.
Pyonephrosis, 497
Pyo-salpinx, 155.
Pyrexia, a conservative force in fever, 533.

Q

Quackery, 501.
Quacks and religions people, 211.
Quadriceps extensor tendon, rupture of, 579.
Quebracho, in asthma, 67; in emphysema and dilated bronchi, 27.
Queen Charlotte's Lying-in Hospital, London, Eng., 376.
Quinine, artificial, 28; erythema following the use of, 627; free, 28; in glycosuria, 544.

R

"Rab and his friends," 648.
Rabies, treatment by hoang-nan, 515
Race prejudice among Baltimore physicians, 390.
Radius, and ulna, backward dislocation of, 374; refracture of the, 245.
Rafter, Dr. J. A., gunshot wound of the abdomen, 64.
Rankin, Dr. Francis H., spasmodic neuralgia, 9.
Rauney, Dr. A. L., notice of book by, 16.
Rattlesnake virus, action of, 461.
Raymond, Dr. H. J., cellulo-cutaneous erysipelas in the cervical region, 485.
Recreations, Sunday, 353.
Rectum, cancer of, 438; imperforate lumbo-colotomy, as a preliminary operation in, 154; inflammation of, 308.
Red Cross Society, the American, 96.
Reflex disturbances from genital irritation, 136.
Registration act, working of, 588.
Read, Dr. H. H., cystic tumor of the stomach, 628.
Reid, Dr. Kenneth, notice of death of, 112.
Remedies, from Madagascar, 491.
Repositor, uterine, 665.
Resection of the precordial region, 138.
Resolution of the Royal College of Physicians, 70.
Resorcine in malarial affections, 349.
Responsibility, the test of, 56.
Resuscitation, of animals after exposure to cold, 489; of the still-born, 417.
Revaccination, necessity for, 70.
Reynolds, Dr. Edward, notice of death of, 26.
Rheumatism, acute articular, heart-lesions in, 202; the salicylates in, 66, 252, 289, 677.
Rhinitis, 617.
Rickets and malaria, 291.
Ripley, Dr. John H., 222.
Roberts, Dr. M. Josiah, elastic tension utilized in adhesive and medicated plasters, 348.
Robinson, Dr. Beverly, 530.
Rockwell, Dr. A. D., notice of book by, 268; observations on hemiplegia, 452.
Rollet, Prof., 307.
Roosa, Dr. D. B. St. John, the revision of its system of medical ethics by the Medical Society of the State of New York, 220.

Ross, Dr. James, notice of book by, 293.
Roosevelt Hospital, 685.
Rubber-tubing in therapeutics, 469.
Rush Medical College, 361.

S

Salicylates, in rheumatism, 252.
Saliva-spots, in clothing, 168.
Sands, Dr. H. B., laparotomy for acute intestinal obstruction, 427; on the value of iodoform as a dressing for wounds, 309.
Sarcoma of the brain, 381, 496; of the forearm, 246; of the kidney, 48; of the larynx, 79; of the liver, 299; of the orbit, 104; of the testicle, 583; of the tibia, 134.
Scapula, fracture of the acromion process of, 302.
Scarlatina, 283; and butcher's meat, 625; and measles, simultaneous occurrence, 461; peculiar changes in the blood (?) globules, 409.
Schools, sanitary requirements of, 632.
Schwann, Dr. Theo., notice of death of, 361.
Sciatica, 243.
Science, sanitary, and the public health, 160.
Sclerosis, cerebral, in children, 514.
Searcy, Dr. J. T., alcohol as an anæsthetic, 203.
Sea sickness, 140.
Self-mutilation, 614.
Serum, of œdematous tissues, sugar in, 515.
Sewerage, system, 266.
Sexton, Dr. Samuel, the question of tasting medicines introduced into the vagina and the ear, 335; the treatment of diseases of the middle ear by milder measures than those commonly in vogue, 57, 75.
Shaffer, Dr. Newton M., the question of reflex disturbances from genital irritation, 53, 193.
Shephard, Peter, notice of book by, 520.
Shrady, Dr. Geo. F., internal use of carbolic acid, 513; lateral lithotomy, 513.
Sickness, in New York, 280.
Silver, nitrate of, 165, 615.
Simmons, Dr. Duane B., medical notes on Asia, 248, 386.
Skeleton, of a prehistoric man, 476.
Skin, boracic acid in affections of, 129; limit of vitality of, 483.
Skoda, 392.
Small-pox, 55, 223; application in, 224; confluent, 159; followed by vaccinia, 138, 224, 279, 447, 475, 615.
Sodium, bicarbonate, in amygdalitis and tonsillar hypertrophy, 168; chloride of transfusion of, 209.
Solvent, for pseudo-membranes, 80.
Smith, Dr. Wm. T., 361.
Spectacles, selection of, 560.
Speer, Dr. A. T., homœopathy, 265.
Sphincters, anal, dilatation of, for hemorrhoids, 509, 537.
Spinal cord, atrophy of the anterior horn, 592, 609; action of chloroform, morphia, and strychnia on, 613.
Spitzka, Dr. E. C., the white line in the fissure of the cortex calcarina, 360.
Sponge-grafting, 12, 587.
Spray, carbolic, a substitute for, 180.
Stammering, 572.
Starr, Dr. M. Allan, poisoning by sulphate of copper, 564.
State Charities Aid Association, 55.
State examinations and the new medical bill, 290, 406.
Statistics, national vital, 56.
Stein, Dr. Alex. W., notice of book by, 132.
Stenosis, mitral, 106; of the cervix uteri, 108.
Sternberg, Dr. Geo. M., the recognition of micrococci, 368.
Sternum, fracture of, 301.
Stickler, Dr. J. W., reduction of temperature by the use of dry cold, 400; temporary febrile rise after simple fractures, 153.
Still-born, resuscitation of the, 417.
Stillman, Dr. Chas. F., sacro-lumbar curvature, 337, 359.
Stomach, cystic tumor of, 628; hyperperistalsis of the, 269; resection of, 457; resection for cancer, 433; resection of, for gastric ulcer, 211.
Stone, in the bladder, symptoms of, produced by reflex irritation, 29.
Strangulation, of the penis, 84; of small intestine, 298.
Stricture, œsophagus, 246, 493; traumatic of the urethra, 245.
St. Francis Hospital, 513.
St. Joseph College of Physicians and Surgeons, 195.
St. Petersburgh, 419.
Subinvolution, of the uterus, 664.
Sugar, in the serum of œdematous tissues, 515.
Suicide, 681.
Suppositories, nutrient, 251.
Suppuration, calcium sulphide in, 472; independent of micro-organisms, 184.
Surgeon-general of the army, annual report of, 159.
Surgeons, dental, in the army and navy, 53; pay of the late president's, 266.
Surgery, in Pompeii, 602; the iodoform era in, 97; tribute to American, 576.
Sutures, surgical needle for wire, 389.
Syncope, from catheterization, 27.
Syphilis, certain remedies in the treatment of, 268; congenital, cranial osteophytes in, 235; in Asia, 419; influence of pyretic diseases upon, 487; malignity of, 189; mercury in, 377; on the fingers of doctors, 448, prehistoric, 49; tayuya in, 139; treated without mercury, 351; treatment of, by hypodermic injections, 167, 675.

T

Tachycardia, in dyspepsia, 601.
Tait, Dr. Lawson, death after ovariotomy due to preliminary tapping, 257.
Tapping, preliminary, followed by death after ovariotomy, 257.
Taylor, Dr. Chas. Fayette, notice of book by, 267.
Taylor, Dr. J. B., a plea for bovine virus, 388.
Tayuya, in syphilis, 139.
Teeth, affections of, in etiology of disease of the eye, 258.
Temperature, excessively high, 12; reduction of, by dry cold, 400.
Temperatures, high local, 262.
Tendon, reflexes, 489; rupture of quadriceps extensor, 579.
Terms, misuse of, 140.
Testicle, sarcoma, 583.
Testimony, medical expert, 191.
Tetanus, acute traumatic, 460; phenomena of, 613; traumatic, nerve-stretching in, 247; woorara in, 573.
Therapeutics, mechanical, 168; the progress of, 156.
Thermometers, clinical, 164.
Thigh, fracture of, 404.
Thomson, Dr. Jos. C., the medical missionary hospital at Canton, China, 498.
Thrombosis, pulmonary, 545.
Thyroid, cysto-adenoma of, 105; mortality from excision of, 615.
Tibia, sarcoma of, 134; syphilitic, 49.
Tinnitus aurium, nitrite of amyl in, 41.
Tobacco, a cause of disease, 675.
Toines, Dr. Chas. S., notice of book by, 295.
Tongue, sudden death from forced depression of, 288.
Tonsil, fibroma of, 296.
Tonsils, treated with galvano-cautery, 308.
Tonsillaris, angina, treated with bicarbonate of soda, 168.
Tonsillotomy, 549.
Torsion, of arteries, 641.
Torticollis, functional, treated by resection of the spinal accessory nerve, 433.

Trachea, care of the, after incision for relief of croup, 342, 355.
Tracheotomy, 513; dangers from canulæ in, 517; secondary, 583.
Training-schools for nurses, 634.
Trance, and a lawsuit, 130; subjects, moral character of, 81.
Transactions, of the International Medical Congress, 363; of the Medical Society of the State of New York, notice of, 354; of the Medical Society of the State of Wisconsin, 355.
Transfusion, 212; in hemorrhages of typhoid fever, 129; intra-arterial, 209.
Trephining, for epilepsy, 571.
Trichinæ, 223, 280, 520; and Southern hogs, 252, 484; in pickled meat, 544.
Tripier's amputation of the foot, 402.
Triplets, 84.
Trocar-catheter, a dome, 321.
Truth, a word for, 23.
Tuberculosis, 165, 234; bacillus, 684; bovine, 413; contagiousness of, 647; Koch on, 545, 547; in the central nervous system of cows, 504; miliary, 612; specific character of, 305.
Tumor, cystic, of the stomach, 628; erectile, of the liver, 359; fibroid of the uterus, 13; fibrous, of Scarpa's triangle, 32; of the cerebellum, 50; of the crus, 50.
Turpentine, Chian, in cancer, 177.
Tyndale, Dr. J. Hilgard, local antiseptic treatment of consumption, 285.

U

Ulcer, gastric, resection of stomach for, 211; gastric, 411.
Ulna, and radius, backward dislocation of, 374.
University of the City of New York, 436, 447; of Pennsylvania, 16.
Universities, German students in, 28.
Uræmia, due to elongated prepuce, 65; experimental, 262.
Ureter, double, 328.
Urethra, dilatation of, for cystitis, 177; fistula in the anterior portion, 244; fracture of catheter in, 134; prolapse of, 489; traumatic stricture of, 245.
Urethrotomy, internal, 470.
Uricæmia, premonitory symptom of diabetes, 515.
Urine, as a medicinal agent, 98; chylous, and filaria sanguinis hominis, 129.
Uterus, displacement of, 273; displacements of, treated in the genu-pectoral posture, 186; extirpation of, 357; fibroid tumors of, 651; ablation, 13; hour-glass contraction of, 488, 569; pendulous, 27; removal of, 335.

V

Vaccination, 191, 526; after small-pox, 224, 279, 475; a plea for improved, 1; compulsory, 392; evidence that it protects, 236; in Scotland, 104.
Vaccina, following small-pox, 138, 447; general eruption of, 393; origin of, 261.
Vaccine-farm, Wisconsin State, 27; virus, ineffective, 347, 418, 475.
Valentine, Dr. F. C., the absence of orgasm, 127.
Valve, aortic, bicuspid, 297.
Vance, Dr. Ap. Morgan, spinal caries, 623; Reuben A., 420.
Vegetables, medical value of, 644.
Vein, subcutaneous slough of, 485.
Venereal diseases, legislative protection against, 409.
Veratrum viride and opium, antagonism of, 52.
Vertebra, lumbar, gunshot wound of, 573.
Vienna Medical School, 448.
Vilas, Dr. C. H., notice of books by, 466.
Viola tricolor, in eczema, 449, 467.
Virus, bovine, 463; a plea for, 388; *vs.* human, 419; humanized *vs.* bovine, 391; vaccine, conditions necessary to efficacy of animal, 69; vaccine, 681; ineffective, 347, 418; spurious, 586.
Visnum album, a substitute for digitalis, 83.
Vitreous, electro-therapy in opacity of the, 42.
Vivisection, 112, 280.

W

Walking, the physiology of, 238.
Whitall, Dr. Samuel, obituary, 222.,
White Mountain Medical Society, 138.
Whittaker, Dr. James T., detection of gall-stones by the exploring needle, 568.
Whooping-cough, 280; belladonna in, 262; chinolin in, 519; pilocarpin in, 181.
Wickersheimer, 392.
Williams, Dr. Cornelius, eserine in glaucoma, 318.
Williams, Dr. Henry W., notice of book by, 294.
Wine-marks, treated by electrolysis, 188.
Wines, fabricated, 492.
Winslow, Dr. W. H., notice of book by, 520.
Wise, Dr. D. A., 361.
Wish-bone, pain and nausea produced by, 196.
Woman, a prolific, 419.
Woman's Medical College, New York, 360; of Philadelphia, 363.
Wood, Dr. H. L., pityriasis rubra, 629.
Woodside, Dr. John S., the obstacles to the abolition of mechanical restraint in our insane asylums, 230.
Wood, Dr. James R., obituary, 528; resolutions, 559, 577, 671.
Wool-sorters' disease, 41.
Woorara in tetanus, 573.
Worcester, Dr. Samuel, notice of book by, 294.
Word-blindness, 609.
Wound, gunshot, of the abdomen, 64; of the vertebræ, 573.
Wounds, penetrating of the chest, 461; the primary union of, 69; value of iodoform as a dressing for, 309, 324.
Writer's cramp, 243, 506.
Wyeth, Dr. John A., cases of goitre treated by excision, 94; fracture of the patella, 596.

BINDING SECT. MAY 17 1966

R
11
M433
v.21

Medical record

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY